Printing Equipment Engineer

OCTOBER, 1941

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Linotype One-Turn Shift is typical of the 55 year old Linotype principle of simple mechanical action governed by sensible engineering standards.

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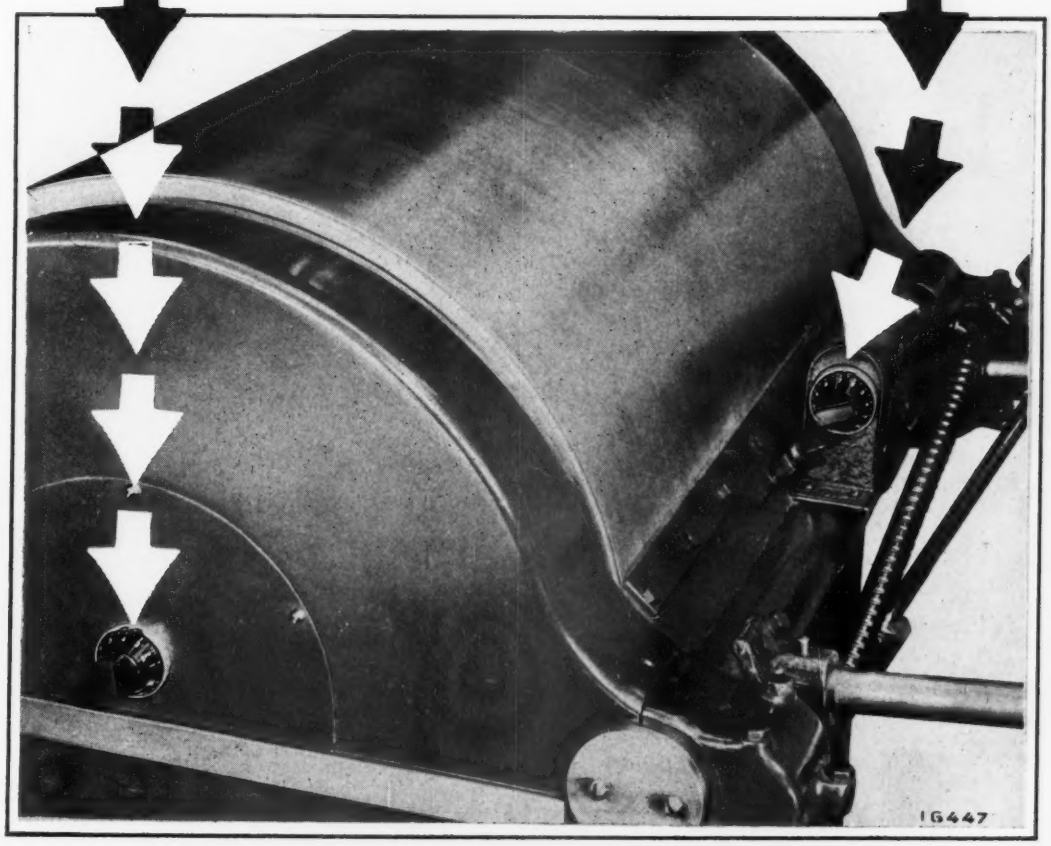

STA-HI CORPORATION

1020 CROCKER STREET

LOS ANGELES, CALIFORNIA

EXECUTIVE ¶s

Vice President Lee Augustine of Printing Machinery Co. recently completed a tour of the mid-west where he initiated a new talk before five Craftsmen's Clubs. The talk is entitled *Increased Efficiency and Greater Profits Through the Use of Precision Metal Bases.* The talk is illustrated by means of a film strip. Most of the illustrations used in the film strip are new. The context of Mr. Augustine's talk is devoted to demonstrations as to what can be accomplished with metal bases by printers.

At a recent meeting of the Board of Directors of Intertype Corporation held September 9, Harry G. Willnus was elected a director of the Corporation, to fill the vacancy created by the death of former Senator George B. Agnew. Mr. Willnus joined Intertype Corporation as

Harry G. Willnus was recently elected a director of Intertype Corporation.

a clerk in 1916. He won rapid promotion and in 1923 was elected Secretary. In 1926, at the age of 29, he was made a vice president. He has traveled in Europe and South America. Born in Brooklyn, Mr. Willnus has been active in Brooklyn industrial and civic affairs and for 12 years he has been a Director of the Brooklyn Chamber of Commerce.

Francis H. Stancliff and E. S. Reed have been appointed assistants to Superintendent G. H. Bancroft of the Travelers' Insurance Company's printing department in Hartford, Conn. Mr. Stancliff has been specializing in layout work for the printing department. Mr. Reed is a graduate of Carnegie Institute of Technology (1937) and has been with Travelers for four years.

Walter B. Patterson, Linotype's director of agencies, gave two talks in Rochester, N. Y., October 20. In the afternoon he addressed students at the Rochester Athenaeum and Mechanics Institute on his experiences in many printing plants. In the evening, at a dinner meeting of the Rochester Club of Printing House Craftsmen, he discussed current conditions in the Graphic Arts.

General Manager Arthur S. Thompson, of the Geo. H. Morrill Company, division, General Printing Ink Corporation, announces the appointment of R. S. Crowell as sales manager. Mr. Crowell joined the Geo. H. Morrill Company

R. S. Crowell is now sales manager of Geo. H. Morrill Co. Div. of General Printing Ink.

Division in 1931 as Boston District Manager. In 1932 he was appointed Manager of the Chicago branch, and in 1937 was made Mid-West Manager. In 1939 he came east to general headquarters in New York.

General Manager John F. Devine has announced the following appointments for Fuchs & Lang Mfg. Co., New York: Robert J. Butler is general sales manager; Walter H. Lynch is assistant general manager of Litho Supplies Div., and Edward J. Halligan is now assistant general manager of the Ink Div. All three executives have been promoted from within the Fuchs & Lang organization.

C. H. Griffith, Linotype vice president in charge of typographic development, is taking a several weeks trip. He is visiting all Linotype agencies in the United States, as well as many newspaper and printing plants in the Middlewest, on the Pacific Coast and in the South, and will attend several meetings of organizations in the graphic arts.

Robert F. Salade, for many years an internationally-known writer in the graphic arts and other fields, died on September 8, 1941, in Philadelphia, Pa. Mr. Salade, who was 57, had been ill for several months and two weeks before his death underwent a brain operation. At the time of his passing he was assistant editor of Graphic Arts Review.

Charles L. Sacks, formerly superintendent in Cuneo Press composing room and foreman in the composing rooms of Braunworth & Co. and American Book-Stratford Press, respectively, succeeds Fred A. Kissner, recently resigned, as plant manager for Ever Ready Label Corporation, New York.

Effective September 15, Director Alvin W. Hall of the U. S. Bureau of Printing and Engraving appointed Thos. F. Slattery as Assistant Director. Mr. Slattery was superintendent of the electrolytic section of the engraving division for nearly 20 years. He is also a past president of the American Electroplaters' Society. Carrol Thomas has been promoted to succeed Mr. Slattery as superintendent of the electrolytic section.

Harry L. Gage, Linotype vice president and chairman of the Advisory Council on Graphic Arts Education, will address a luncheon meeting of the Typothetae of Philadelphia, November 13. His subject will be *Can Printing Education Meet the Industry's Needs?*

Walter P. Carroll, assistant manager of the Chicago branch of the National Lead Co. since 1938, has been promoted to manager, the appointment taking effect in August. He succeeds A. E. de Campi who retired in July. Mr. Carroll has been with the National Lead Company since April 1910 after graduation from Loyola University. He is 49 years of age.

The Eastern Lithographers Association, 1776 Broadway, New York, an organization of employing lithographers with members in the New York Metropolitan Area has announced the appointment of Walter E. Soderstrom as executive secretary. D. R. Morean, of American Colortype Co. and president of the Eastern Lithographers, made the announcement following a board meeting earlier this month. Mr. Soderstrom will succeed Robert P. Inglis. The new post will in nowise affect Mr. Soderstrom's duties as executive secretary of the National Association of Photo-Lithographers, it is announced.

Beg Pardon!

In the September issue it was stated that Robert D. Berry is now sales manager of New England Newspaper Supply. Mr. Berry's new connection should have been given as sales manager for Eastern Newspaper Supply, Corona, N.Y.

CLOSE to all of us is the threatening spectre of tuberculosis. No respecter of persons, it lurks in every corner, may strike at any moment. *More people between 15 and 45 die from tuberculosis than from any other disease.*

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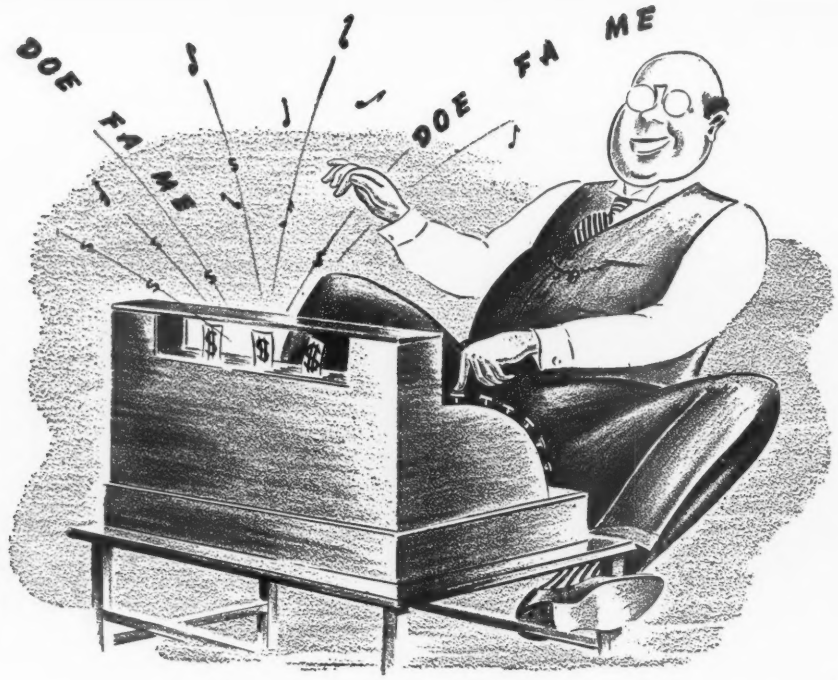

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Leading Articles, October, 1941

Executive Paragraphs..... 2

Offset-Lith Equipment and Supplies Situation.....15

Photo-Lithographers' Convention.....17

Buffalo Evening News Production Flows Smoothly.....18-19

Illinois Mechanical Conference.....20

Electrotype Mat Patterns.....22
J. HOMER WINKLER

Dot-Comparator for Offset-Lith Presswork.....24
ADAM HENRI REISER

Making Out Purchase Orders Under A-10 Rating for Newspapers...26

Equipment and Supplies.....28

Employment and Service.....32

Printing Patents Report.....35

Printing Metals Situation.....42

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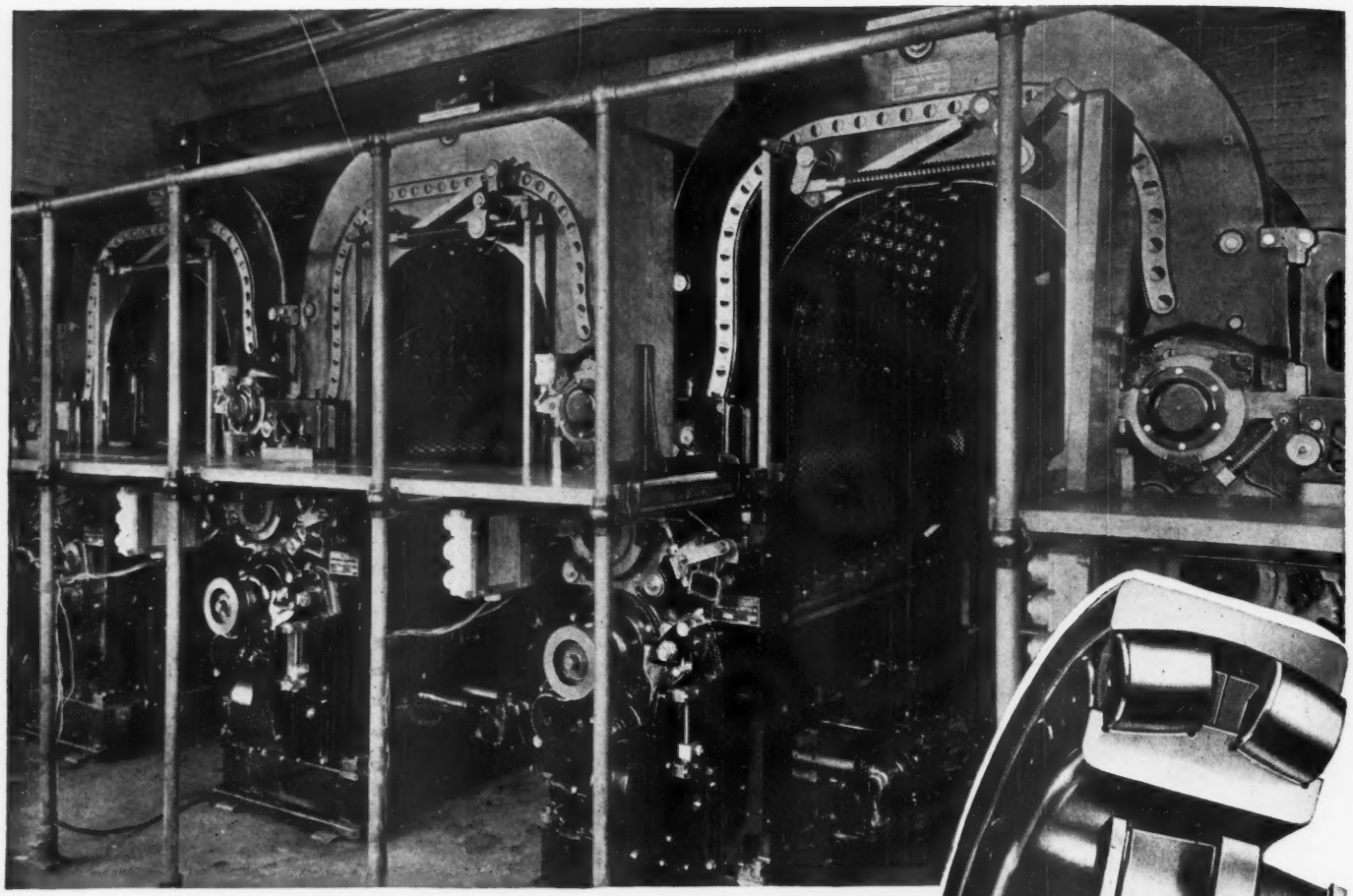

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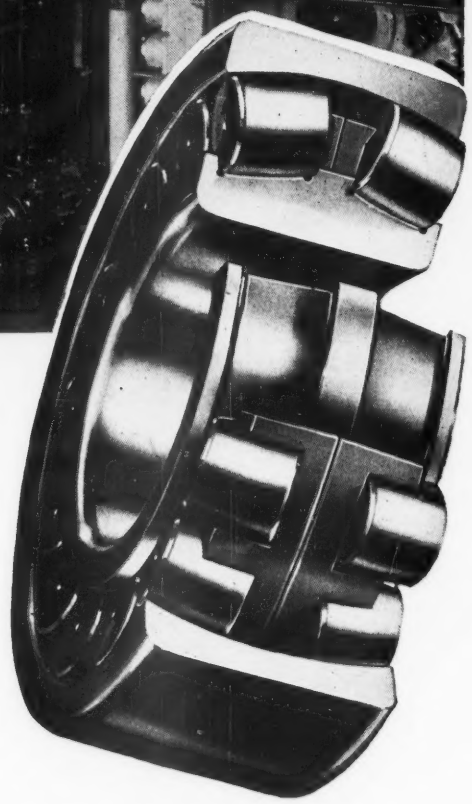

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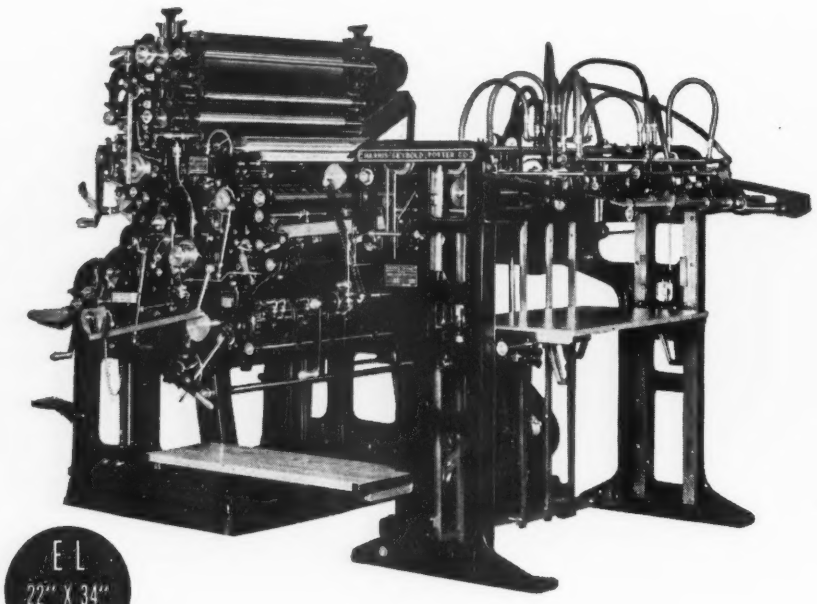

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The extent of our participation in the National Defense Program has necessitated a considerable reorganization of our staff and equipment. We are not unmindful of our obligation to the many users of Miehle Printing Presses and to the graphic arts in general. Our customer relationships, painstakingly built over many years, are invaluable to our company's present and future . . . probably more valuable than all our physical assets combined. And so, in our plans we have provided for:

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BRYANT PAPER COMPANY

Paper for Letterpress, Lithography and Rotogravure

KALAMAZOO, MICHIGAN

Sales Offices: **CHICAGO—CINCINNATI—NEW YORK**

KEEP 'EM ROLLING

● Yes *keep 'em rolling!* During this period of national emergency, the service of the press becomes more dramatic, more profound, more essential to the American way of life.

On the mechanical side, it's an important job — important because it means the continuous production of newspapers, keeping the public informed and carrying the uncensored editorial convictions of a free press.

No matter what Goss may be called upon to do in the interest of national defense, it is prepared to do its part in the servicing of newspaper presses. To help you *keep 'em rolling,* every possible provision has been made to handle all calls for repairs and replacement parts.

Whether you're East, West, North, or South — regardless of your location or the nature of the emergency — the Goss Service Department can fill every order within a short time after it's received at the factory. Write, wire, or phone at any hour — day or night! Let's *keep 'em rolling.*

THE GOSS PRINTING PRESS CO., 1535 S. PAULINA ST., CHICAGO

GOSS

NEW YORK: 220 E. FORTY-SECOND ST.

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SEND FOR THIS BOOKLET

(*in which Science confirms Experience*)

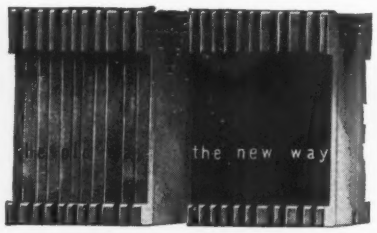
The booklet shown above describes a series of tests made recently by Dr. Matthew Luckiesh, Director of the General Electric Company's Lighting Research Laboratory, showing the relative visibility of BLACK & WHITE processed reference marks on Linotype and Intertype matrices, as compared with non-processed reference marks.

The tests showed that after a period of use the ordinary reference marks are about as visible as 3 point type (printed in black ink on white paper). Under the same conditions, BLACK & WHITE contrast reference marks, as processed exclusively by Matrix Contrast Corporation, have the visibility of 9½ point type. Here are approximate specimens of the type sizes referred to by Dr. Luckiesh:

8-point **9½-point**

In this comparison, the type at the right represents the visibility of BLACK & WHITE processed reference marks, while the other type represents the visibility of used non-processed reference marks.

No wonder contrast reference marks save one-third of all errors in news type composition—and an even larger proportion of errors in ad composition. Mail the coupon for your copy of the Luckiesh booklet. You will find it interesting.



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Sole Licensees of the Percy L. Hill Matrix Contrast Patents Nos. 1,466,437 and 1,796,023

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Send your booklet on visibility tests of Linotype and Intertype reference marks, made by means of the Luckiesh-Moss Visibility Meter

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Word Picture of Offset-Lith Equipment and Supplies Situation

PRODUCTION and mechanical executives in the offset-lith branch of the printing industry have been watching the news eagerly with respect to the equipment and supplies situation in relation to the Defense program. News, rulings and opinions, mostly unofficial, are being circulated. Some of these unofficial reports, it seems, have not been improved in passing from person to person. The result is that most executives are somewhat bewildered because of lack of co-ordinated and authoritative news sources affecting equipment and supplies used in the printing industry as a whole.

The trend of things, however, may be gathered from statements made by various representatives of manufacturers and suppliers catering to the offset-lith branch of the industry. A number of these representatives appeared before the recent National Association of Photo-Lithographers convention in Cincinnati. Below we print abstracts taken from the statements.

Suggests Intensive Planning in Offset-Lith Printing Plant

*By H. A. PORTER**

**Vice President in Charge of Sales, Harris-Seybold-Potter Company*

I BELIEVE planning it is vital to all of us in the lithographic industry. If conditions were normal *all* of our attention and effort would be centered upon getting more business and little or none would be devoted to the vexing problem of delivering what we have sold.

Two periods in the twenty-five years just past offer an amazing contrast in merchandising efforts and results. The first was the wild and enthusiastic era during, and particularly following, the first world war. The second was the resounding crash that swept all of us *out* of the boom of the late twenties into the depression.

I do believe that either of these extremes is a potential hazard to our present business progress. There are definite reasons why this is true. First, all of us are, or should be, much wiser than we were in the past. Second, we are all analyzing our markets more closely. Third, there is going to be a tremendous rebuilding job to be done in the future, and fourth, changes will be made as a result of conditions and new developments.

Of course, our problem at Harris is the same as it is with probably all of you and right now it is *supplying the lithographic industry with what is needed out of what is actually available.*

The first world war left us face to face with unheard of demands. Business wanted everything—wanted large volume, and it did not want to wait. Many of us went out on a limb and made promises, and these promises in some cases could not be fulfilled. Substitute promises were made. More promises were made to soften the disappointment of the substituted promises, and so on.

The trouble was not so much in the actual conditions as it was in our manner of meeting them. Truthfully, many businesses did not know what to do. When the other extreme hit us in the early 30s our solution was really no better than before.

Three things control the present business picture at Harris. There is *first* the matter of the availability of machines due to the pressing need of materials for defense; *second*, the matter of delivering what is available; *third*, the cost. None of these three factors can be stabilized right now. Too many things enter into the rapidly changing conditions for that. Schedules are everywhere losing their value.

We *can* do something worthwhile. Actually our company has done it. Like every other manufacturer we accept the defense situation as something vital to our business life. We go further than that, however, by planning ahead.

Unlike the conditions which caught business unprepared at the close of World War I, we have more control now over the various elements in manufacture and distribution. We are not making impossible promises, because we have a more comprehensive outlook. Naturally, like you in the production end, we have to use a flexible price range, but even this, under our present planning, varies to a minimum degree.

In our factory, the press ordered is started under a definite schedule. First, the materials needed and the time they will be available are established; second, the time factor necessary in construction is charted, and, finally, the finished machine, and its delivery are scheduled. There is no guesswork up to this point. A definite promise is made, based on known facts.

The escalator clause, governing prices, and the government priority clause in regard to materials as well as finished products, are necessary, as conditions beyond our control may change from day to day.

No one can say with certainty that demand will increase or decrease, or that materials now available will not be under a government priority tomorrow. This, too, is favorably affected by planning—a protection for all of us in the industry.

Defense is diverting materials which might normally go into lithographic presses, but careful planning eases the situation and encourages wider opportunity to utilize available facilities with greater efficiency.

Perhaps we, as manufacturers, cannot always make prompt delivery, but we try to tell you when delivery *can* be made.

I believe the lithographic industry in general might well institute more intensive planning, and thus avoid too much of the extreme "highs" and "lows" which are common in the days when deliveries are affected by growing demands for national defense.

We have found planning worthwhile. It has enabled us to control our production, and exert the greatest effort where effort is most needed.

Printing Plant Expansion Must Take Form of Increased Operating Efficiency

*By THOS. R. JONES**

**President, American Type Founders*

AMERICAN Type Founders has been and will continue to do its best to satisfy the most urgent requirements of the lithographic industry, but unless there is a marked change in the allocation of basic manufacturing supplies, it is now apparent that the company, along with other printing equipment manufacturers, will shortly be forced to curtail production of its usual products.

ATF's immediate problem, however, is not that of manufacturing capacity, but of the ability to obtain raw materials needed to continue normal production.

The lithographic industry has not been granted and probably cannot hope for a grant of priority by the Office of Production Management for new machinery. There is good reason to hope, however, that sufficient raw materials

will be made available to equipment manufacturers to permit repair parts to be supplied in order to keep the present plant capacity of the lithographic industry in operation.

American Type Founders will continue to manufacture so long as it can obtain steel castings, bearings, motors and other essential materials. The company's policy will be to fill orders as nearly as possible in the order in which they are placed.

So far, prices of printing equipment have been advanced only moderately. This has been made necessary by current wage increases and by the rising cost of materials. Price, indeed, is not a major factor in the current problem, for the equipment manufacturer could not produce any more or any faster even though he should increase prices two or threefold

What it boils down to from the point of view of the lithographer is that he must "make do" to a very large extent, so long as the national emergency continues, with the equipment that is already available to him. Expansion must take the form of increased efficiency of plant operation and of more continuous use of present equipment.

Meanwhile American Type Founders has no intention of discontinuing its search and development program. It is unlikely that any new models will be announced so long as the present crisis continues. The company has every determination of continuing its forward-looking policy in the interest of lithographic production in the future.

Synthetic Resins

*By H. J. HUNT**
**The Dayton Rubber Manufacturing Co., Dayton, O.*

ANYONE today who will make a prediction about getting materials such as synthetic resins, certainly is a confirmed optimist with a lot of fortitude. I know nothing outside of the metals that were spoken of here today that is quite as important and vital in defense work as some of the synthetic resins.

The companies that manufacture these materials have increased their facilities to beyond what they estimate to be the possible use, and therefore, they anticipate no shortage. Of course, anything can happen. I have given you the situation up to the present minute from the viewpoint of the management of our company. So far as costs are concerned, you can look for anything. I do not know. Tomorrow might be a different story entirely.

Rollers

*By H. H. COLEHOWER**
**Godfrey Roller Co., Philadelphia, Pa.*

THE government is allotting the amount of rubber and synthetic materials to be used month by month. The picture is about the same for cotton. Our suppliers of cotton material won't sign a contract that cannot be cancelled in case the government needs the material. We are trying to do everything we possibly can to keep you supplied, and I think you will have to keep faith with us.

Rollers and Blankets

*By B. P. NILLES**
**Rapid Roller Company, Chicago, Ill.*

WE have been assured by suppliers that we will get our materials. Of course, the story may change, but we feel that from conferences we have had with them, we will get our materials. That is, so far as rollers are concerned. The same thing applies to synthetic materials. Another important item is fabric. Our last year's fabric contracts were filled. In March, the suppliers accepted our contract, but say it will cost 15% more. The blanket situation has exceeded our anticipations so we had to order more fabric just recently, and they said they would fill our order but it would cost 20% more. So you can see that in the last six months, the cost of fabrics has increased 35%. That is a part of the total cost of blankets, so in view of that increase, we have to increase the price, not 35%, but approximately 10%

We feel we are in a position to supply you with blankets, not only this year, but during 1942, providing something unforeseen does not arise.

Chemicals

*By WILLIAM C. BELL**
**The Coleman and Bell Co.,Cincinnati, O.*

IT is fair to say that 60% of the business in chemicals is done between manufacturers. In other words, it is buying and selling back and forth, and finally one of the organizations pushes an item out to the consumer.

I think the chemical industry could make a fair bargain, that if the aluminum and zinc people will give you plates, the roller people will give you rollers, we will give you chemicals. Now probably the ink people will say, "If you will give us chemicals, we will give you ink."

Zinc Plates

*By WILLIAM F. SYNNOTT**
**Illinois Zinc Company, Chicago*

YOU are all probably wondering if zinc will continue to be available. That is something we cannot tell you. It has been available up to this point. We ourselves operate our lithographic rolls at full capacity, but we do not know whether there will be further government regulations that will take a greater amount of our metal.

Where you have defense orders, I would like to impress up on you it is very important that you cover them with priority certificates and preference ratings. This enables your supplier to get his raw materials.

The monthly production in 1939 of slab zinc (which is the base material) averaged about 44,850 tons. In 1940 this had increased to 58,842 tons. In 1941, for the first 8 months it was over 70,000 tons, with August being the largest production month.

Mr. Synnott was asked if it would be possible to exchange old zinc for new. Mr. Synnott said: "There is a plan whereby you can return your old plates and have them replaced with new plates. My suggestion is to return your plates to whichever zinc company furnished them to you. That will give the company an opportunity to get its own material back, and know what is in it.

Aluminum Plates

*By E. J. NELSON**
**Aluminum Company of America, New York*

IN 1941, we have shipped practically no litho sheets made of new metal. We have gone into a business that is known now as"toll fabrication," that is, taking the customer's old metal and refabricating it and shipping it back to him in the form of new sheets.

There is no aluminum and will not be for nobody knows how many more months except for defense. I am happy to say, however, that although a number of lithographers are making out their questionnaires for toll fabrication and are making them out honestly as to whether or not their request is for national defense, still I am told by our people in Washington that it is their opinion such toll fabrication agreements will be accepted as long as we have the capacity and equipment.

Asked is there any change in the price situation with reference to aluminum? Mr. Nelson said: "Yes, there has been. Three years ago, aluminum sold for 20c a lb. It took a drop of 1c in 1939. Then it dropped to 18c and 17c a year ago. On October 1 aluminum ingot will sell on the base price of 15c per lb., considerably under prices sold before. We hope 15c is not the bottom."

Someone volunteered the information that the only way a lithographer can get aluminum now is through refabrication of scrap aluminum or aluminum that he already has in his own plant. In this statement Mr. Nelson concurred.

Chemicals and Substitutes

*By WILLIAM H. WOOD**
**Director of Chemical Research, Harris-Seybold-Potter Company, Cleveland, Ohio*

WHETHER we like it or not, we are in this war, and it should be apparent to anybody that our industrial economy was never intended to provide everyone in the world with everything he needs, whether paid for or not, while maintaining our supplies to domestic consumers.

The lithographic process is a chemical process and many of the products used by our industry are strategic, or depend for their manufacture on strategic elements or compounds. Many chemicals, not now strategic, may soon become so. Modern warfare takes almost everything known to chemical science in one form or another.

Some of the products our industry vitally needs are plate metals, chromium salts such as the dichromates, solvents such as the alcohols, egg albumen, organic acids, certain pigments and papers. Other things dependent on factors soon to operate may cause a shortage of phosphoric acid and phosphates, deep etch developing liquids, hydrocarbons both natural and synthetic, ink resins and varnishes and perhaps other materials.

Each of us, individuals and companies alike must begin an active search for substitutes at once. This will be difficult now; it is no easy task even in normal times. Alcohol can be conserved by diluting it with non-defense solvents—dichloroethyl ether, for example. Egg albumen can be replaced by substituting coatings made from less valuable proteins like soya casein. Gum arabic can be replaced by products native to the North and South American continents.

Delivery on chemicals and prepared chemical compositions should be as good as in normal times except for priority materials which may be difficult to replace. So far there is little evidence of any profiteering on lithographic chemicals and there should be none. Prices should be raised only when forced by substantially higher raw material costs and higher manufacturing and labor costs.

Necessity is truly the mother of invention, and we are certainly now faced with the necessity of finding new, and if possible, better materials. We can rest assured they will be found.

PHOTO-LITHOGRAPHERS *hold most successful convention in history of association—Equipment and supplies field in relation to offset-lith printers covered by manufacturer representatives*

MEMBERS of the National Association of Photo-Lithographers came to Cincinnati, September 18, 19 and 20, to get latest information about adjusting their business and production managements to present economic conditions. Convention sessions covered many phases of offset-lith plant management including systems for scheduling work going through the plant, handling the sales force, advertising, personnel policies, new lithographic technical developments and the present dominating priorities problems. A total of 681 lithographers and equipment and supplies representatives registered.

In recognition of the need for unified action by the Graphic Arts Industry, reference was made to the organization of a Graphic Arts Industries Council, composed of one representative from each of the national trade associations in the Graphic Arts. The National Association of Photo-Lithographers went on record as favoring an overhead organization which would serve the government and the Graphic Arts Industry in the many problems confronting industry and government today.

President Merle S. Schaff of Dando-Schaff Printing & Publishing Co., Washington, D. C., opened the convention and summarized the work of the association during the past year. His address pointed out the difficulties encountered in operating a lithographic plant under the present emergency. "Today," said he, "the question uppermost in the minds of most of us is not where we can get orders to produce at a profit, but rather where we can get men and materials to produce orders already on hand or available. Official Washington in determining how much butter we can use while we are making guns has placed civilian industry under fire. Particularly affected are the advertising, publishing and printing businesses of the nation. The official attitude, at least as exemplified by two spokesmen for the government is that advertising is largely non-essential in the cost of distributing material. As consumer advertising media are affected, the entire Graphic Arts Industry will feel the cut. The outlook on materials, equipment, paper and many chemicals is decidedly unfavorable for us. But we are not here to spin out fanciful pictures about the future, but to face the truth so that in the months to come our industry can be forewarned and forearmed."

A. G. McCormick, jr., newly-elected president of the National Association of Photo-Lithographers. He is associated with The McCormick-Armstrong Co., Wichita, Kas.

A. S. Koch of the Keller-Crescent Co., and Rex G. Howard of the Peoria Blue Print & Photopress Co., Peoria, Ill., presented extensive studies supported by comprehensive exhibits of the forms used in their plants for scheduling work through the office and plant.

Sales Manager A. J. Fay of the National Process Co., New York, discussed *Selecting, Training and Directing a Lithographic Sales Force.* His address dealt with specialty selling, general selling, engineering creative selling, service selling, assignment of territory and accounts. He pointed out that only by carefully thought-out plans religiously adhered to could a real sales force be maintained. He discussed at length backing up the salesman, use of the sampling kit, how orders are handled, methods of compensation and various sales contests.

A symposium discussion on *Advertising from the Lithographer's Viewpoint* was presented by President Harry E. Brinkman of Foto-Lith, Inc., Cincinnati; Allen H. Frost of Copifyer Lithograph Corporation, Cleveland, and Ray M. Collins of A. H. Mathias & Co., Pittsburgh, Pa. Each of the speakers exhibited the material utilized in their advertising plans.

The Eastman Kodak Co., represented by Alexander Murray, John McMaster, J. A. C. Yule, F. B. Johnston and C. Q. Glassey, explained two new Eastman developments—the Kodagraph Contact Screen Process and the Kodak Fluorescence Process.

R. G. Patterson of Agfa Ansco, delivered a most interesting talk on *How Important is the Photographic Art?*

Personnel Policies were discussed by A. G. McCormick, jr., the new president of the National Association of Photo-Lithographers.

Joseph E. Machell of the Stecher-Traung Lithograph Corporation, discussed *Pressroom Problems.*

Under the chairmanship of Paul A. Heideke, Washington (D.C.) Planograph Co., Inc., and Summerfield Eney, jr., of Champion Paper & Fibre Co., a number of technical experts and members lithographic production problems in an all-day clinic on Saturday.

In making his report to the Cincinnati convention, Executive Secretary Walter E. Soderstrom said, among other things that "Trade associations proceed by education rather than by compulsion as a means of eliminating the destructiveness of cut-throat competition. When we come together at meetings to discourage dishonest and deceptive dealings, mis-

(*Continued on Page 40*)

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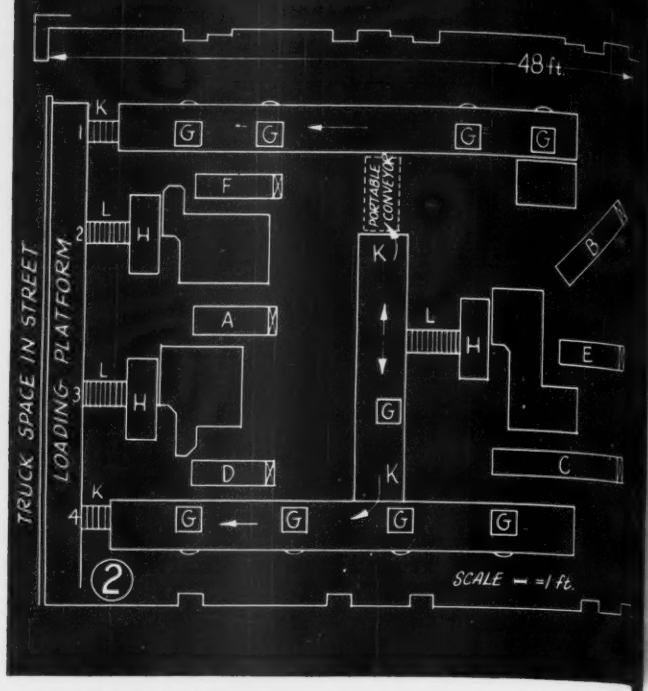

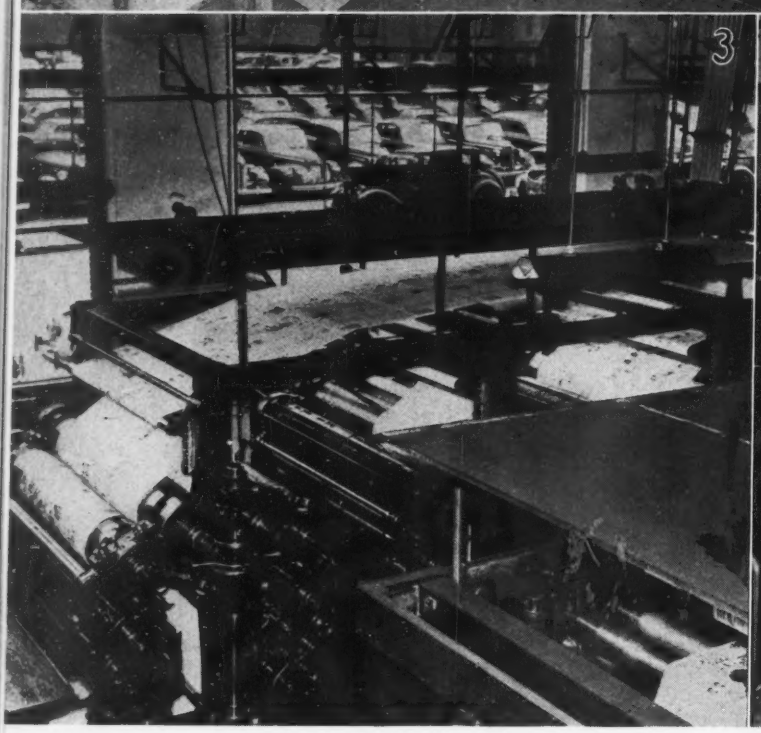

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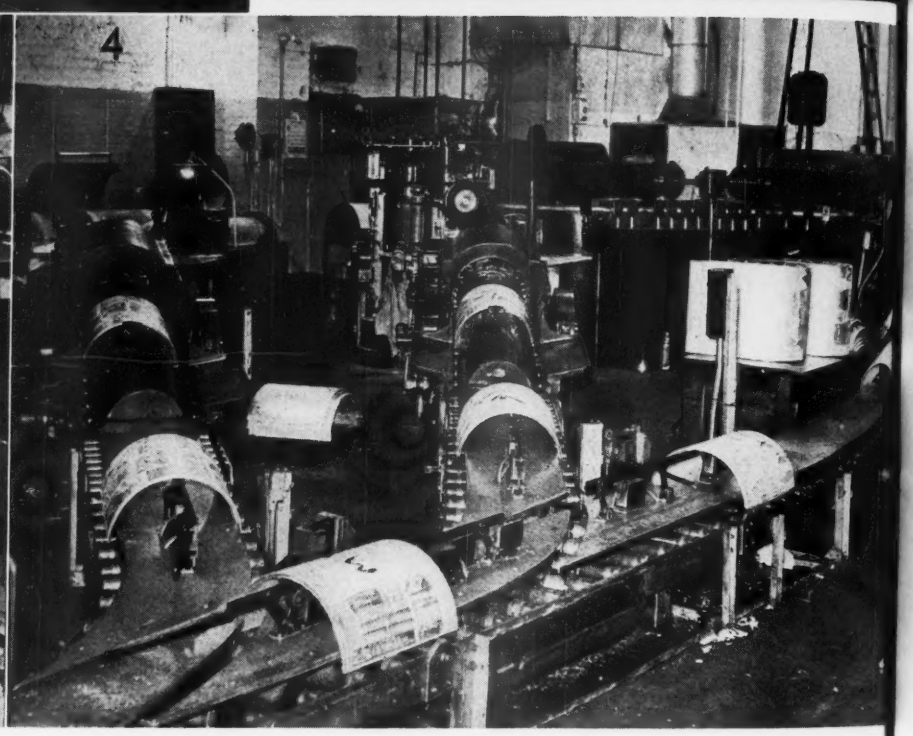

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Views in Three Mechanical Departments — Buffalo (N. Y.) Evening News ➤➤➤

Fig. 1—*View in mailing department of Buffalo* Evening News. *Over 230,000 papers are handled daily. For the 2 o'clock edition, 70,000 papers are tied and delivered to trucks in the street in 45 min.*

Fig. 2—*Diagrammatical illustration showing equipment layout and work-flow in mailing room of the Buffalo (N.Y.)* Evening News. *Floor space occupied is approx. 48 ft. by 46 ft. At* **H** *are shown three Parker automatic wire tying machines. These machines are served by high speed press conveyors,* **D**, **E** *and* **F**, *and by slowspeed press conveyors* **A**, **B** *and* **C**. *At* **K** *are indicated the bundle conveyors under mailing tables.* **L** *represents conveyors from Parker machines* **H** *to loading platform on street. Openings* **G** *in the mailing tables are for Girard hand-tying machines which are used in an emergency which might be caused by a breakdown of one of the Parker machines.*

Fig. 3—*View in section of pressroom of Buffalo (N.Y.)* Evening News *Canopy guards mounted above the presses are designed to prevent ink mist being deposited on walls and ceiling.*

Fig. 4—*View in stereotype foundry, Buffalo (N.Y.)* Evening News. *Stereotype plates from the three Wood Autoplate machines are delivered automatically, one at a time, to the main-line conveyor which delivers the plates to the pressroom.*

Infra-Red Dritherm Lamps

Nalco inside-silvered carbon filament lamps, manufactured by North American Electric Lamp Co., have been developed for infra-red ray processes in drying, baking, heating, and dehydrating. The polished silver in the base end of the lamp acts as a reflector to project the infra-red rays toward the surface being worked on. The manufacturer claims the red-ray emanation from the carbon filament falls in the more desirable band on the Angstrom scale for maximum drying efficiency.

Nalco inside-silvered lamps are available in the model R-40, 250 W., 110-120 v. Clear glass infra-red lamps are also available. The clear glass types require separate gold-plated or aluminum reflectors.

View of Nalco inside-silvered carbon filament lamp, 250 w., 110-120 v.

Production *flows smoothly at accelerated pace in Buffalo* Evening News *mailing room — Canopies over presses eliminate settling of ink mist on walls and ceiling—Automatic multiple lead plate conveyor*

AT the time of the A.N.P.A. Mechanical Conference last June, many out-of-town mechanical executives visited Buffalo newspaper plants to become acquainted with the production technique and equipment used in those plants. To demonstrate that visiting mechanical executives are interested in production matters, we will mention that one executive brought along his movie camera to get a permanent first-hand view of the Buffalo *Evening News*' mailing department while an edition was in progress.

Mechanical Superintendent Lew Woelfel of the Buffalo *Evening News* has kindly furnished some data about the mailing room, the automatic stereotype plate conveyor leading from three Autoplate shaving machines for delivery of the plates to the pressroom, and a canopy which has been erected over each press to minimize the gathering of ink mist on the walls and ceiling of the pressroom.

The mailing department of the *News*, of course, has been arranged for straight-line production. Our readers will get some idea of the production handled in this department when it is stated that over 230,000 papers pass through the mailing room each day. For the 2 o'clock edition, 70,000 papers are delivered to the mailing room. These are tied in bundles by three Signode Steel Strapping Co.'s Parker automatic wire tying machines and are delivered to trucks by conveyors all in 45 min.

The floor plan equipment layout is shown in diagram Fig. 2. The three Parker automatic wire tying machines are indicated at H. Three high speed press conveyors, D, E and F, deliver papers to these machines, as do also the three slow speed press conveyors, A, B and C.

Mr. Woelfel states the Parker machines have a capacity of 26 bundles per min., but the News mailing department ties from 14 to 22 bundles per min., the speed being governed mostly by the flow of papers from the press conveyors to the wire tying machines. Papers are tied 100 to a bundle up to 36 pages, and in bundles of 50 when the paper contains more than 36 pages. There are also many bundles containing an odd number of papers.

Four men work at each machine—1 operating and 3 counting, topping and feeding. As will be seen by diagram Fig. 2, there are four street delivery openings. Bundles from the rear machine (shown at left in the diagram Fig. 2) can be sent by conveyor to either No. 1 or No. 4 street opening by reversible belt. Nos. 2 and 3 openings are permanent.

The mailing room equipment layout is so arranged that if one of the Parker machines should get out of order temporarily the mailing crew can switch to the Gerrard hand-tying machines on the tables leading to Nos. 1 and 4 street openings. This arrangement provides smooth operation without delays which might be caused by mechanical breakdowns.

Like all other newspapers, the *News* has been troubled with ink mist settling on the walls and ceiling of its pressroom. Most newspaper organizations take pride in the neatness and well kept appearance of the mechanical departments. Ink mist, however, is no respector of anything—its principal objective (if it can be said to have an objective) is to produce a filmy black coating on everything adjacent to the presses. Even where walls are coated with slick white paint, misting defaces them. Result, as everybody connected with newspaper production knows, is the gradual shutting off of the light reflecting qualities of bright walls and ceiling.

Business Manager C. G. Underhill suggested to Mr. Woelfel that canopies be installed over the Goss presses to prevent, or at least minimize, the effects of ink misting. The canopies are made in sections 48 in. by 8 ft. long (the width of the press). See Fig. 3. The sections are made from brass wire mesh (60 to the in.) and are supported in angle iron frames. The frames can be taken out and washed at six-month intervals.

A rather interesting plate conveyor installation is that extending from the stereotype department to the pressroom. As will be seen in Fig. 4, a conveyor leads from each of three Wood Autoplate shaving machines and converge at a common point at the one-track stereotype conveyor which delivers the plates to the presses. The automatic conveyors were installed by Cline Electric Mfg. Co. Delivery of the plates to the one-track conveyor is controlled by automatic switches (operated when struck by a plate) so that jamming of plates is prevented should several come down from each machine at about the same time.

Printing Executives Invited

Manager F. A. Melcher of the Chicago Printers' Machinery Works, 609 West Lake St., Chicago, announces that 8000 ft. of floor space has been added to the company's machine shop. Mr. Melcher invites out-of-town visitors to inspect the company's display room and machine shop.

TECHNICAL LITERATURE

Production and Mechanical Executives wishing to secure copies of the literature described below may do so by addressing the manufacturer direct, or by sending request to Printing Equipment Engineer. *We'll be glad to pass your request on to the manufacturer.*

Four Christensen Folders

Bulletin No. 101—In this bulletin is illustrated and described the Christensen New Continuous Stream Feeder. For application to presses and varnishing machine. One model may be applied on the feed board where room in the pressroom does not permit location of machine on floor behind the press.

Bulletin No.102—Christensen Pile Suction Stream Feeders are illustrated and described in this bulletin.

Bulletin No. 103—Illustrated and described in this bulletin is the Christensen High-Speed Bronzer. Operates in conjunction with and at normal press speeds. Manufacturer states: "You produce cleaner work by dusting both sides of the sheet."

Bulletin No. 104—Christensen Multiple-Head Gathering and Stitching Machine is illustrated and described. Pony Models mount from two to six stitcher heads—larger models from two to eight heads. Machines are available in ¼ in., ⅜ in. or ½ in. capacities in several sizes for practically any class of saddle-stitched work.

Monotype Cross-Rule System

Illustrated four page bulletin published by Lanston Monotype Machine Co. explains the Monotype Giant Caster Cross-Rule System for Blank Rule Forms. Specimen showing how a form was made up from material is shown on page 4 of the bulletin.

Ameripol D Synthetic Rubber

Featured by four tables, which contain data enough to answer almost any question on the subject, The B. F. Goodrich Company has just published an 8 page catalog section on its Ameripol D synthetic rubber, used in making mechanical rubber products. Ameripol D was developed in The B. F. Goodrich laboratories by Dr. Waldo L. Semon, by an exclusive polymerization process from butadiene. Its basic material is petroleum.

First of the tables compares the properties of Ameripol in 33 specific respects starting with "workability" and ending with "resistance to paint and ink dryers" with natural rubber and two other types of synthetic rubber, giving the rating of each in the various categories.

The second table lists the properties of typical Ameripol D vulcanized compounds.

Table three gives the per cent volume increase after 48 hours immersion of natural rubber and two other types of synthetic rubber, as compared to Ameripol D, while the fourth table is a rough guide to determine the service where the use of Ameripol D is practical.

Plentifully illustrated with pictures showing mechanical rubber products made with Ameripol D, the folder discusses in detail its properties, hardness, tensile strength, elongation, weight, color, odor and taste, elasticity and permanent set, tear and abrasion resistance, and resistance to flexing, oils and solvents and heat.

Linotype Publications

Model 5 Linotype—Four page illustrated bulletin printed in two colors, describes mechanical features of Model 5 single-magazine Linotype.

Type Mechanized—Illustrated booklet, 16 pages and cover, printed in color. A reprint of the original article by Frank McCaffrey in a recent issue of *SYK Review*. A romanticized account of the writer's impressions of the invention and development of the Linotype in relation to the Graphic Arts.

Vented-Tube Nozzle Folder

Four page illustrated folder published by Lanston Monotype Machine Company describes and explains function and maintenance of Vented Tube Nozzle for composition typecaster and material making machines. Use of the nozzle is claimed to eliminate some type, rule, spacing and base material problems.

Start—Jog—Stop

Booklet done in color with illustrations discusses Dayco Rollers for printing by letterpress and offset under extremes of temperature, at speed and with special inks.

Rotary Precision Shaving

Six page illustrated bulletin published by Monomelt Company describes performance and construction of Plane-O-Plate Rotary Shaving Machine for shaving metal plates and metal or wood base for plates.

Production Control in plant of Decatur (Ill.) Newspapers discussed by Production Manager Mintun at Illinois Conference; Composing executives, machinists and pressmen-stereotypers hold interesting clinics

By STAFF WRITER

THE 1941 Illinois Newspaper Mechanical conference opened Sunday, September 28 at Hotel Nelson, Rockford, Illinois with about 150 in attendance. The call to order was issued by Earl E. Anderson, Mechanical Superintendent of the Rockford *Morning Star* and *Register-Republic*. One of the recurring topics of discussion was increasing costs and possibility of a shortage of materials.

John Stafford, promotion and circulation manager of the *Morning Star* and *Register-Republic*, spoke on *Your Newspaper as the Fundamental Advertising Medium*.

Monday's schedule called for a meeting of the whole conference in the Crystal Room at 9:30 A. M. At that time, reports by chairmen of the various Sunday afternoon group meetings were presented. Howard M. Colton, Press Room Superintendent of the Bloomington *Pantagraph* spoke of *News Deadlines from the Mechanical Side*. J. Harold Mintun, Production Manager of the Decatur Newspapers, Inc., spoke on *News Budgeting, Copy Control and Deadlines*.

Composing Room Meeting

Composing Room Superintendent, Frank Bauer, of the Quincy *Herald-Whig*, presided at the Composing Room meeting Sunday afternoon. The meeting opened with a discussion about turning off electric pots at the end of shifts. The consensus was that if the pot could be turned off for seven or more hours and if by doing so the rate of current did not go into a higher bracket, it would be profitable to turn them off. Cracking of crucibles is more or less remote in the newer electric pots.

Some time was spent in the discussion of dispatch rooms. It was also learned that an increasing number of newspapers having dispatch rooms lay out the paper and furnish the composing room with dummies.

Screening of metal trimmings from under machines was suggested as a means for recovering matrices and spacebands.

A great deal of time was spent in discussing whether or not the savings made by using 4-column rules instead of 6 and the setting of news in agate instead of 7 or 8 were really true savings.

Nothing should be done to make the paper less legible. Savings in many instances can be accomplished by more careful editing, better selection of news, fewer decks on heads and reduction of margins.

Most men use machine-cast and stereotype base more than once. The loss in height from molding usually is from 0.001 in to 0.003 in. The majority of stereotypers claim that such slight loss is inconsequential.

Supply men feel that the OPM has been treating the newspapers very well in the matter of supplies and the fear of running short of material is premature. It was suggested, however, that newspapers continue to order supplies in amounts to be used within two or three months but nothing beyond that point. It was suggested also that all zinc should be released from morgues and libraries and that carboys for acids be returned to supply houses immediately after emptying.

New Officers for Illinois Conference

NEW officers of the association are: President, W. Hershel Baldwin, Composing Room Superintendent, Peoria Star; *Vice-President, Howard M. Colton, Press and Stereo Superintendent, Bloomington* Pantagraph; *Secretary-Treasurer, Ed Nagel, Composing Room Superintendent, Champaign* News-Gazette. *Directors: Wilbur Augspurger, Engraving Foreman, Peoria* Star; *Earl Anderson, Mechanical Superintendent, Rockford Consolidated Newspapers; Ellsworth Bailey, Press Foreman, Alton* Telegram; *Harry Pottle, Western Newspaper Union, Chicago; Russell B. Miller, Mechanical Superintendent, Bloomington* Pantagraph.

Machinists' Group Meeting

The increased attendance and interest shown marked this as one of the best Machinists' meetings thus far held according to Chairman Harry Pottle. The chairman had passed out question cards previous to the meeting and sixteen were returned, some containing more than one question.

Highlights of the meeting were the following questions and discussions, which should be regarded as the consensus of opinion of those present.

The first question requested some discussion on the merits of chrome-plated spacebands. The thoughts expressed were that they might measure up to the requirements of spacebands in all respects but one—there is no assurance that metal will not collect on the slides at the casting point if used without the customary cleaning. The old-fashioned method of rubbing the bands on a graphite board with the regular daily inspection, while not cherished, is still recommended

Someone wanted to know whether larger wattage elements were procurable for display machines using a large amount of metal. Not knowing of any available, hot metal feeding was recommended where the cold metal feeders were not able to keep up with the parade.

And then there was the perennial question: *What causes the molds to lead up and why*? The chairman stated that he has been looking for the answer to this

Printing Equipment and Defense

By THOMAS ROY JONES*

*President, American Type Founders and President of the National Printing Equipment Association. Abstract of statement made to the industry on September 20.

THE printing equipment manufacturers of the country have been among the first to be called into defense production. Defense contracts already assumed by these manufacturers, while not large in terms of total defense spending, are very substantial indeed when considered in the light of the normal manufacturing capacity of our industry.

The immediate problem, however, is not so much that of manufacturing capacity as of adequate supplies of raw materials. By increase of working hours, additions to machine tool equipment and in some instances additions to plant, the equipment industry has stepped up production so as to handle defense contracts and at the same time continue deliveries to regular customers. Now, however, productive capacity is of no avail because basic commodities are lacking.

The printing and lithographic trades have not been granted, and probably will not be granted, priority by the Office of Production management with respect to new machinery. There is every reason to hope, however, that priority rating will be granted on repair parts sufficient to keep the present plant capacity of the graphic arts in operation. The problem of the printer and lithographer is, therefore, not so serious for he should be able to continue normal business to the extent of his present abilities even though the possibilities of plant expansion may be limited.

The printing equipment industry has been and will continue to do its best to meet the most urgent requirements of the printing and lithographic trades, but unless some relief is granted by the government almost immediately in the matter of basic supplies, many printing equipment manufacturers may be forced greatly to curtail normal production, if indeed they will be permitted to operate at all in the usual channels.

Illinois Newspaper Mechanical Executives Gather in Rockford, Ill., to Discuss Production Problems

question for many years. Many theories have been advanced, but no one seems to be able to offer definite proof to back up his opinion.

Some advance the theory that molds lead up quicker when they have been overheated and have lost their temper, while others think that the chemical ingredients of the steel have a greater bearing on the stickiness of a mold than the softness or hardness of the steel.

Experiments have shown, it is claimed by some, that some steels have a greater affinity for type metals than others. We do know that some molds lead up quicker than others and we do know that we must clean these molds more often, but the reason is still a mystery to many of us.

Budget and Control System

J. Harold Mintun, Production Manager of the Decatur Newspapers, Inc., made an extremely interesting talk on how his newspapers operate under a complete news budgeting and control system. The personnel has been working out the rough spots in the plan through the years and with complete co-operation through all departments.

The news space is budgeted at the beginning of the year for the whole year and it is watched closely daily. Mr. Mintun said they can tell at the beginning of the year, within a small sum, what the entire cost will be. It works out well for that organization because of the complete understanding in all departments of the problems involved. When asked if the editors liked the plan he said they did because they always knew how much space is available for editorial purposes. If news was heavy, they edited the matter accordingly.

An imaginary fence is set up between the advertising and news departments in the composing room. The foremen on both the day and night shifts put on the required number of news operators and

(*Continued on Page 34*)

1—Emil Lundberg, Foreman, *Daily Times*, Davenport, Iowa; Harley Mintun, Mechanical Supt., Peoria *Star*; Earl E. Anderson, Mechanical Supt., Rockford Consolidated Newspapers; Ed Nagel, Composing Room Supt., *News-Gazette*, Champaign, Illinois.

2—J. L. Prentice, Machinist, Springfield *State Journal*; Harry Pottle, Western Newspaper Union, Chicago; Lester Brown, Machinist, Rockford, Illinois Consolidated Newspapers; Folke Lundstrom, Floorman, Rockford Consolidated Newspapers.

3—William Hart, Press Foreman, *Daily News*, Beloit, Wisconsin; Earl Ford, Engraving Foreman, Bloomington *Pantagraph*; Howard M. Colton, Press and Stereotype Superintendent, Bloomington *Pantagraph*; Wilbur Augspurger, Engraving Foreman, Peoria *Star*.

4—Herbert Rockwell, Machinist, Decatur Newspapers Inc., Q. E. Herman, Machinist, St. Louis, Missouri; A. C. Poggemiller, Supt.,Wisconsin *State Journal*; Sherman Irish, Mechanical Supt., *Herald-Whig*, Quincy.

Electrotype Mat Patterns

for newspaper stereotype reproduction

By J. HOMER WINKLER*

**Assistant Manager, The Ace Electrotype Company, Cleveland, Ohio. Abstract of address delivered before the 44th annual convention of the International Association of Electrotypers and Stereotypers, Chicago, Ill., September, 1941.*

ELECTROTYPE mat patterns are generally used by only two kinds of customers—the newspapers and the commercial (or job) stereotype concerns. The electrotype mat patterns delivered to newspapers are not always considered as such, and too frequently the newspapers are supplied with printing electrotypes only. When electrotypes are furnished to newspapers having stereotype departments, and where it is known that the electrotypes thus supplied are to be used for mat molding—the electrotypes furnished should have most of the physical and mechanical features of a mat pattern. An average copper electrotype shell thickness (0.008 in.), a plate thickness of 0.105 in. instead of 0.152 in., and a backing of regular electrotype metal compositions are mechanically permissible for newspaper patterns as compared to mat patterns intended for commercial shops.

Editor's Note—*Newspaper production and mechanical executives will read with interest this abstract of a talk delivered by Mr. Winkler before the recent Electrotypers and Stereotypers convention in Chicago. Perennially, since adoption of electrotyping standards in 1930 by the I.A.E.&S., the A.A.A.A., and the A.N.P.A., there has been complaint by newspaper executives that these standards have not been observed in the making of electrotype plates for advertising reproduction. Mr. Winkler discussed the problem before his trade association and it is hoped that some action will be taken in observing the 1930 standards by those supplying the industry.*

Requirements

Some physical and mechanical requirements are common to all mat patterns.

Mat patterns should be furnished unmounted. Newspapers prefer to mount them on their own metal bases and commercial shops generally use them unmounted.

Uniformity of thickness of the pattern is a most important item. Although small variations of 0.001 in. or 0.002 in. are customarily ignored by the electrotyper, these small errors cause the greatest trouble because they are usually undetected before the mat molding is performed. Mats are seldom made from a single pattern so that variations of from 0.001 in. to 0.004 in. or more in the individual patterns used in a sheet assembly in commercial shops, or in a page form at the newspaper, causes delay in production. The thickness of mat patterns for commercial stereotyping should be 0.152 in.

At the Thirty-Third Annual Convention of the International Association of Electrotypers and Stereotypers in Boston (1930) a report of the Standardization Committee of our Association was adopted, recommending a thickness of 0.105 in. for ad plate electrotypes for newspaper use. The American Newspaper Publishers Association and the American Association of Advertising Agencies had previously agreed on 0.105 in. for the ad plate electrotype thickness. Apparently the desired uniformity in thickness of electrotypes supplied to newspapers has not been attained thus far.

For several years the trend toward precision printing in newspaper publishing has been a dominate note of conventions. Every effort is being made to improve the quality of newspaper printing. Electrotypes for newspaper use have been critically considered by the mechanical executives of newspapers. These executives are of the opinion that there is a need for improvement in quality and in the uniformity of physical attributes.

Accurate Plate Thicknesses

An important feature at recent A.N.P.A. Mechanical Department conventions has been the discussions on irregularities of the thickness of electrotypes supplied to newspapers. The discussions indicated that the problem has two phases. First, the electrotypes received are usually in one of a group of three average thickness—0.065 in., 0.105 in., and 0.152 in. and that individual plates may vary plus or minus 0.010 in. from the average of their group. Second, individual plates frequently vary in thickness in different portions of the same plate. The problem of providing metal bases for this variety of thickness is apparent. A number of newspapers have installed rotary shavers and shave all electrotypes received to approximately 0.065 in. as a standard practice. One height base only is then required. Variations of 0.001 in. or 0.002 in. from standard thickness is usually not detected and, therefore, actually causes the most trouble in mat and stereotype production. Variations from standard of 0.003 in. or more are generally detected and corrected, or compensation is introduced to equalize the error. It can be seen from the foregoing how important it is to shave all electrotype mat patterns (or ad plate electrotypes) *accurately* to a single predetermined standard, preferably 0.105 in.

Electrotypers should today renew their interest in the Standardization Committee Report adopted in 1930 and agree to put into effect the recommended thickness of 0.105 in. for newspaper plates. Our industry would thereby extend the kind of cooperation to the newspaper publishers, that it has been soliciting from other Graphic Arts industries. An additional advantage to the electrotyping industry would result from the adoption of 0.105 in. as a standard thickness for newspaper mat patterns, namely, an appreciable saving in electrotype metal. As a defense measure, the possibilities of adopting a thickness of only 0.065 in. for newspaper electrotype mat patterns is worthy of consideration.

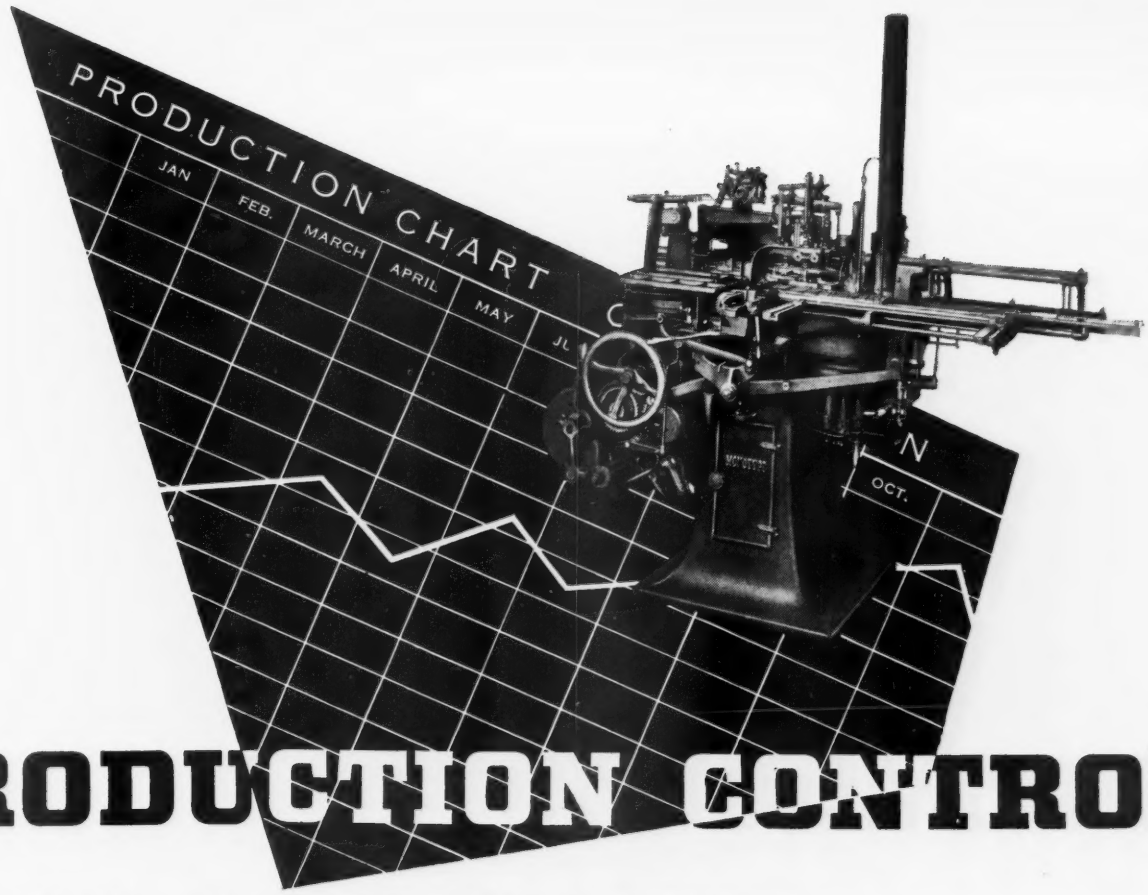
Leave in Dead Metal for Color

In one-color (black and white) patterns, all of the dead metal should be routed out, regardless of the size of the non-printing areas. Where two-color patterns, or several patterns that must print the same size as each other, but having differences in the amounts of printing areas, are being prepared—all the dead metal should be left in. If possible, a nearly solid printing surface should be obtained. Dead metal areas are more quickly and easily identified and routed out if marked in some fashion. A routed ¼ in. gutter is desirable between the printing areas and the non-printing areas. Register marks, scribe marks, or any devices for purposes of plate register should be left in the pattern. The mat patterns should have holes drilled for register pegs, or at least show center locations for subsequent drilling, if peg devices are to be used in retaining position of the patterns and mats during rolling.

Non-Printing Area Depth

An essential requirement is to have the proper distance between the surface plane of the non-printing areas and the printing plane in a mat pattern. This depth should never exceed 0.050 in. The heaviest packing felt generally used in stereotyping is 0.045 in., and unless these deep areas are filled in by the stereotyper, they are not picked up in direct pressure molding. Deep spaces also inter-

(*Continued on Page 44*)



PRODUCTION CONTROL

Is a MONOTYPE FEATURE

The most profitable and efficiently operated commercial and job composing rooms are those in which a choice in method of production can be made between *all machine-set*, *all hand-set*, or *machine-typesetting supplemented by hand work*—by choosing the best method for each job.

Such a composing room must inevitably be MONOTYPE-EQUIPPED—for the Monotype is the only typesetting machine which also makes display type, rules, borders, slugs, leads and other materials used in hand composition of advertisements, job and commercial work, etc.

The versatility and flexibility of the Monotype System and the high quality of printing done from Monotype-cast type are the foundations of profitable operation for job and commercial printers and publishers throughout the entire world. *Complete information given upon request.*

LANSTON MONOTYPE MACHINE COMPANY

Monotype Building, Twenty-fourth at Locust Street, Philadelphia, Penna.

Display Set in Monotype Squareface; Text in Monotype Baskerville

Dot-Comparator

Is it necessary for offset-lith presswork?

By ADAM HENRI REISER

WHO is at fault when an offset-lith press plate "goes bad" in the offset press? Some contend it lies on the pressman's shoulders when upward of a thousand sheets have been taken from the plate. On the other hand, others feel so many variables form part of the picture as to make it manifestly unfair to the pressman to dismiss the matter summarily. And there are many variables to be pieced together by the pressman to turn out a presentable job — variables of ink, paper, fountain solutions, plate, machinery, not to mention the weather.

To mix the ingredients in proper proportion is a pressman's job. To check their performance is another. Habitual checking on his part contributes much to the longevity of the press plate image. A quasi-scientific approach to the checkup of the offset-lith image is developed in the following letter.

I am employed as a pressman in a large lithographic shop. At present I am confronted with a complicated problem. I would like to get any possible knowledge on this matter.

It is the belief of the owner of the company that by constant studying of the dot, we can eventually improve and trace any kind of trouble by just taking our glass and looking at the dot. He lists a large number of things that can be traced to the dot, such as too much acid or not enough; too much pressure or not enough; ink too tacky or not tacky enough; blanket too hard; not enough pressure or overpacked; dampening too much or not enough water—a list of things whose length would take too much space to write.

He bases his claims on that of the bacteriologist. He says the ordinary man looking through a microscope at a bug sees them all alike, but that to the doctor there is a difference. He says the same should hold true for the pressman, and that by constant study of the dot, he should get to know it, recognizing just what the trouble may be that is creeping in when printing is not so good.

There is a lot of truth in what he says, but it is my belief that the whole is a tiresome study and not for a pressman to achieve in three or four years, but more or less for research to look into. It is his contention that the dot should be perfectly round. Since I have been in the litho business I do not feel I can truthfully say that I have seen a dot under a glass that was perfect. I hope I have made myself clear in this letter.

Truly yours,

C. D., St. Louis, Mo.

There is much of value in the foregoing. On lengthy runs, microscopic examination of a comparative nature of the dot may reveal evidence of error of judgment, the correction of which might easily prolong the life of the press plate image. Note we say, "examination of a comparative nature." By that is meant the comparison of the image on the press plate at the start of the run under optimum conditions, with the impression on the press sheet. Comparison of the starting sheet with subsequent sheets as the run progresses should always be made also.

Comparison is stressed, because as pointed out, dot structure varies. To assert a dot is perfectly round is to climb way out on a limb. How about a half-tone tint where the corners just connect? How about quarter tints whose dots have square corners? How about the dot broken up by grain formation? How about the queer shaped dots caused by special stops?

Of course, round dots should print round. When tails follow them like Haley's comet, a symptom exists which portends trouble. The symptom may be caused by a loose blanket; there may be too much play in the boxes; pressure may be too great; one cylinder may be running faster than the other due to unequal peripheries; or, any one of a number of possibilities. To examine the dot and declare unequivocably for one of the lot may be possible, but a great deal of additional information must also be at hand.

Press Trade Skills Are Varied

This additional information is noted by the experienced pressman almost unconsciously. While his press is running, he observes the condition of the plate surface, the inking rollers, the dampeners, the blanket and with his practiced eye spots the danger signals just as surely as though they carried red lanterns.

Examination of the plate tells him there is trouble brewing if the surface has not a dull, velvety appearance while running with the dampeners down. If there are white spots showing (dry parts of the plate) then he checks his dampener setting if both his brass and dampeners are clear of any ink film and have no hard covers.

If his ink looks lifeless and dull upon the rollers, he recognizes tattle tale signs of an incorrect water supply, or, perhaps a faulty ink roller setting, if his ink isn't too long to start with. When his plate becomes smeary, he realizes his water supply system needs examination because it is supplying water either too freely or too sparely. Too much moisture usually accumulates at the rear of the impression blanket, or it may be seen in a dull, lifeless ink. Again, the latter symptom may be caused by doping up the ink too well but not too wisely, or it may also be due to a faulty roller setting.

Smeary plates may be caused by a decided change in the composition of the fountain solution from that used at the start of the run. A pH test run on the solution in the fountain will quickly reveal whether it has changed, a change that may occur due to the transfer of lint and dust from the paper.

Slurring; scumming; piling ink on the rollers; ink piling on the blanket; broad streaks which might show the need of backlash adjustment, or report a swollen or loose blanket; narrow streaks which might show a wrong pressure buildup; or, if the streak is back from the front edge a distance equal to the circumference of the form roller, it may mean a heavy roller setting. These are only some of the words in the language of the press that must be understood by the pressman.

Operating a press calls for a variety of skills. Many of these are alike whether the run is small or large. However, a pressman with short runs has a limited number of moves at his command to conduct his job efficiently. Any increase in the number of these moves spells trouble. This is understandable with the high speed machinery in use today. It is, of course, true in long runs also. But there is a difference in work where a new plate is put on the press every half hour or so and where one plate suffices for a day or longer.

In short runs no time can be spent in corrective measures. Starting conditions must prevail that insure output as near the start as is humanly possible. Pressure must be correct at the start. A few points beyond regular pressure may leave no visible signs of harm on a run of a few thousand sheets. On long runs the contrary holds true. There kiss pressure is desirable, for it is common knowledge that pressure builds up during a protracted run due to swelling of the blankets and roller under the friction of constant speed. Starting with a high squeeze then, brings a gradual abrasive action on the image (work) due to the increasing pressure.

"A grain of prevention is worth a pound of cure," holds true in pressmanship. Much pressman proficiency is exhibited before ever a sheet is pulled. Examination of the dot is of little aid there. Let's have a dot-comparator if it is felt there is need for one. But by all means let's have qualified instruction for qualified apprentices in shops so that necessary skills are instilled. Capable mechanics will then find no need for dot-comparators, for "causes" will then be nipped at the source before they can become "effects."

Examining dot structure to determine causes, it seems to me is a method similar to that used to identify localities by the two inebriated gentlemen driving about the land. One says t'other, "Johnny, we're not knocking down trees any more. We must be getting into a city; we're knocking down people now."

A well-known Western New York publisher has been added to the faculty of the Department of Publishing and Printing at the Rochester Athenaeum and Mechanics Institute in Rochester, N. Y. He is Thomas H. Alvord, publisher of the Livonia (N.Y.) *Gazette*. He will teach newspaper administration, a new course covering all phases of weekly newspaper management; history of printing, writing and publishing. The Department of Publishing and Printing is sponsored by the New York State Publishers' Association. Mr. Alvord is a graduate of Hamilton College and holds a master's degree from Columbia University.

HOW TO GET BETTER PRINTING from an OLD PRESS

The answer is . . . true-surfaced stereotype plates.

To make it possible for your old press to keep on serving you . . . or to get best results from your new press . . . see to it that your printing plates are of uniform thickness and free from low spots. The way to insure this is to use vacuum casting equipment, which is applicable to all Wood Autoplates, new or old, of all models.

VACUUM pulls the stereo matrix against the accurately curved surface of the casting box, thus producing plates of remarkably uniform thickness and splendid printing quality. The final result is beautifully apparent in the printed sheet.

Let us refer you to users of vacuum equipment in your vicinity. They will tell you how to get better printing from an old press . . . or a new one.

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • NEW YORK OFFICE: 501 FIFTH AVENUE

WOOD Stereotyping Equipment

Making Out Purchase Orders Under A-10 Rating for Newspapers

PRINTING EQUIPMENT Engineer has been asked to give a simple explanation of the procedure to be followed when a newspaper plant wishes to make out a purchase order for repair or emergency-inventory-preference rating A-10 under preference rating order P-22.

We do this without having had benefit of an official ruling of any kind, simply outlining the procedure from the content of a copy of Preference Rating A-10 under Preference Rating Order No. P-22. We do not intend to tell you *just what* may be purchased under this order; at the moment, however, paper is not subject to the A-10 rating.

Supposing that you need a gear for a newspaper printing press, you would (1) make out the purchase order in the usual manner to the press manufacturer. Next (2) you would rubber stamp or have typewritten upon the order the following phrase: "*Purchase order for repair or emergency inventory-preference rating A-10 under preference rating order P-22.*" (3) This statement must be endorsed with the signature of a responsible official of your company who has been designated for such purpose by your company. (4) The purchase order for the press gear is then sent *direct* to the press manufacturer, it not being necessary to send it to the Office of Production Management. (5) Your company must retain endorsed copies of all such purchase orders or contracts segregated from all other purchase orders or contracts for a period of two years from date for inspection by authorized representatives of the Office of Production Management.

"Emergency inventory" as explained in the accompanying article entitled "A-10 Priority Repairs Rating for Newspapers," is taken to mean a minimum inventory of replacement parts (spare parts) for equipment used in newspaper production to enable the user to repair or replace immediately, for instance, a broken, damaged or worn-out part in a machine, that is, a part essential to the operation of a producer's property or equipment in printing and publishing a newspaper.

While a newspaper printing plant is not directly concerned with the placing of another phrase upon the copy of the purchase order he sends to his supplier, yet we are reprinting here the statement the manufacturer must endorse upon your original and all copies of your purchase order for the press gear. The statement is as follows: "*Purchase order for material required to fill a duly rated order for repair or emergency inventory. This purchase order bears preference rating A-10 under preference rating order P-22.*"

It is suggested that if a producer (newspaper plant) does not fully understand the procedure to be used in making out a purchase order under the A-10 emergency inventory preference rating, or exactly to what it may be applied in his purchases, that he consult the nearest Priority Division Field Service Office. The offices are as follows:

Priority Division, Field Service Offices

Atlanta, Ga., Federal Reserve Bank Bldg., John B. Reeves, Dist. Mgr.
Baltimore, Md., Baltimore Trust Bldg., Theodore M. Chandlee, Dist. Mgr.
Boston, Mass., 30 Pearl St., William P. Homans, Dist. Mgr.
Buffalo, New York, M&T Bank Bldg., Paul R. Smith, Dist. Mgr.
Charlotte, N. C., Liberty Life Bldg., J. E. MacDougall, Dist. Mgr.
Chicago, Ill., 230 So. LaSalle St., Warren G. Bailey, Dist. Mgr.
Cincinnati, O., Union Trust Bldg., Bruce W. Burroughs, Dist. Mgr.
Cleveland, O., E. Sixth St. and Superior Ave., Wm. T. Walker, Dist. Mgr.
Dallas, Texas, Wood and Alkard Sts., James B. Crockett, Dist. Mgr.
Denver, Colo., 17th and Arapahoe Sts., Virgil Board, Dist. Mgr.
Detroit, Mich., 160 Fort St., West, Walter Hall, Dist. Mgr.
Houston, Texas, Federal Reserve Bank Bldg., Geo. L. Noble, Jr., Dist. Mgr.
Indianapolis, Ind., Circle Tower Bldg., Albert O. Evans, Dist. Mgr.
Jacksonville, Fla., Hildebrandt Bldg., Geo. H. Andrews, Dist. Mgr.
Kansas City, Mo., Federal Reserve Bank Bldg., Clifford H. Carr, Asst. District Mgr.
Los Angeles, Calif., 1151 So. Broadway, G. Howard Hutchins, Dist. Mgr.
Minneapolis, Minn., Rand Tower Bldg., Willard F. Kiesner, Dist. Mgr.
New York, New York, 33 Liberty St., John D. Pollock, Dist. Mgr.
Philadelphia, Pa., 925 Chestnut St., Frederick W. Slack, Dist. Mgr.
Pittsburgh, Pa., Grant St. and Ogle Way, Chas. C. Cruciger, Dist. Mgr.
Portland, Ore., Bedell Bldg., J. Fred Bergesch, Dist. Mgr.
Richmond, Va., Federal Reserve Bank Bldg., Fred P. Wilmer, Dist. Mgr.
San Francisco, Calif., Federal Reserve Bank Bldg., Andrew L. Kerr, Dist. Mgr.
Salt Lake City, Utah, Utah Oil Bldg., Ralph E. Bristol, Dist. Mgr.
San Antonio, Texas, 415 W. French Pl., Carl L. Pool, Dist. Mgr.
Seattle, Wash., Stuart Bldg., William D. Shannon, Dist. Mgr.
St. Louis, Mo., 411 Locust St., Louis E. Crandall, Dist. Mgr.

A-10 Priority Repairs Ratings for Newspapers

ON September 9, a Priorities Order of O.P.M. was given an A-10 rating for repair parts by Donald Nelson, Director of SPAB. The order applies to twenty industries, among which is the newspaper printing industry with plants engaged in the publication of newspapers.

According to the ANPA Committee on Supplies which reports in ANPA B-Bulletin No. 43, the new plan permits qualified producers or suppliers to apply the A-10 rating to deliveries of required parts by endorsing a special statement on purchase orders, certifying that the material is being ordered for repair work under terms of the order of September 9. No application need be sent to Washington.

Representatives of the ANPA have been conferring with OPM officials for several months about a priority rating for newspapers for maintenance and repair work. The ANPA, at the request of OPM, presented estimates based on information secured from various suppliers as to what is needed to take care of maintenance and repair work for newspapers. *The ANPA estimates cover all newspapers, both daily and weekly, regardless of frequency of publication and regardless of membership of a newspaper in any association.*

Unless revoked sooner, the order will expire on the 28th day of February 1942. In section (G) of the order, provision is made for revocation or amendment by the Director of Priorities at any time.

An abstract of the order is as follows:

PART 958—REPAIRS
PREFERENCE RATING ORDER NO. P-22

958.1 **PREFERENCE RATING ORDER.** For the purpose of facilitating the acquisition of material for the repair of the property or equipment of certain industries and services hereinafter specified, a preference rating is hereby assigned to deliveries of material for such purpose upon the following terms:

(A) **DEFINITIONS.**

(1) "Producer" means any individual, partnership, association, corporation, governmental unit, or other organization engaged in one or more of the following industries and services, and such other industries and services as may be added from time to time by supplement to this order:

The 20 industries affected are listed here in the order.

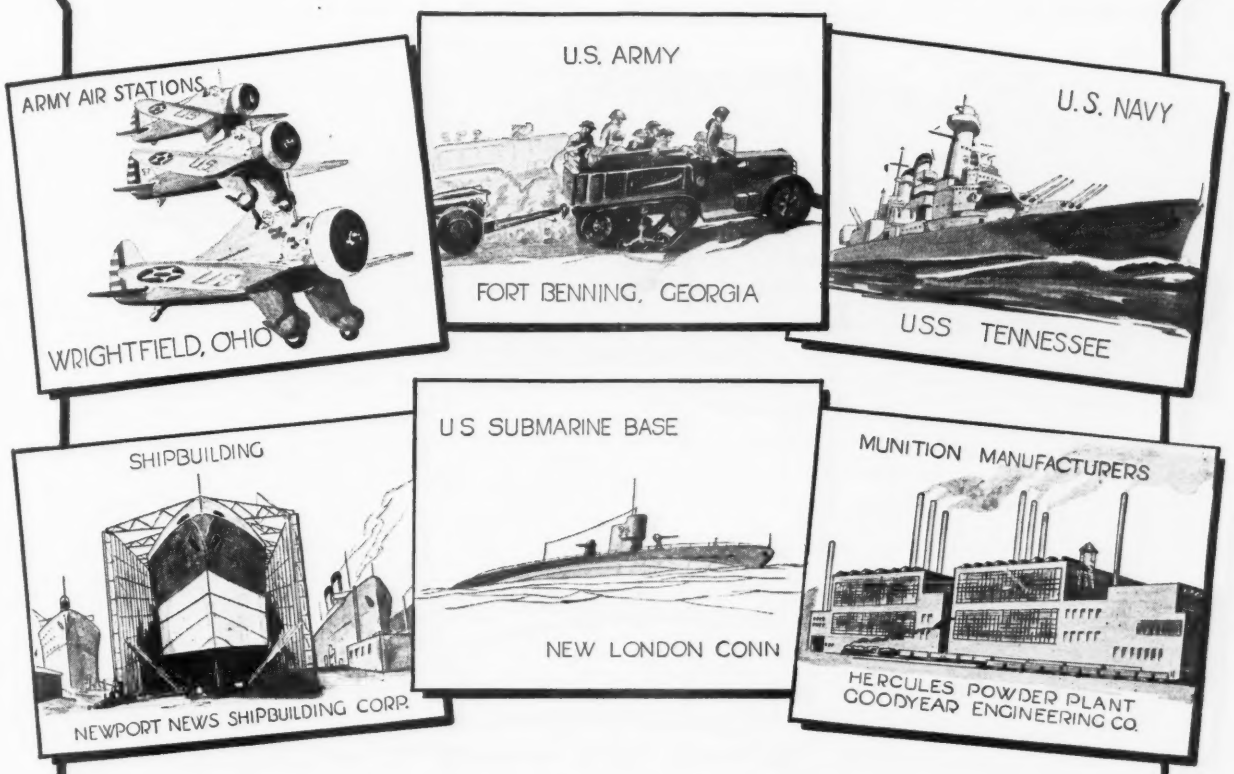
(2) "Material" means any commodity, equipment, accessories, parts, assemblies, or products of any kind.

(3) "Repairs" means only repairs needed because of an actual or imminent breakdown, from whatever cause, of a producer's property or equipment.

(4) "Emergency inventory" means minimum inventory of material required to provide for repairs to meet an actual

THERE'S A REASON WHY!..

KLUGE PRESSES HAVE BEEN PLACED IN THESE VITAL DEFENSE ORGANIZATIONS. . . . .



The United States Government has found, after thorough testing, that the Kluge is the press that meets its needs.

RECENT GOVERNMENT INSTALLATIONS

NAVAL AIR STATION
Jacksonville, Fla.

NAVAL AIR STATION
Corpus Christi, Tex.

ARMY AIR CORPS
Wrightfield, Ohio

FORT BENNING
Georgia

JEFFERSONVILLE DEPOT
Jeffersonville, Ind.

NAVAL SUPPLY DEPOT
Norfolk, Va.

FORT ARMSTRONG
Hawaii

NAVY YARD
Boston, Mass.

NAVAL TRAINING STATION
Newport, R. I.

NAVY YARD
Portsmouth, N. H.

U. S. SUBMARINE BASE
New London, Conn.

NORFOLK NAVY BASE
Portsmouth, Va.

NAVY YARD
Brooklyn, N. Y.

FORT RILEY
Kansas

NAVY YARD
San Pedro, Calif.

NAVY SUPPLY STATION
San Diego, Calif.

NAVY YARD
Pearl Harbor, Hawaii

U. S. NAVAL BASE
Guantanamo Bay, Cuba

NAVY YARD
Mare Island, Calif.

BETHLEHEM STEEL CO.
Quincy, Mass.

NEWPORT NEWS SHIPBUILDING CORP.
Newport News, Va.

HERCULES POWDER PLANT
Wilmington, Del.

GOODYEAR ENGINEERING CO.
Charlestown, Ind.

KLUGE AUTOMATIC PRESS

BRANDTJEN and KLUGE, INC.

SAINT PAUL, MINNESOTA

or imminent breakdown, from whatever cause, of a producer's property or equipment.

(5) "Supplier" means any person with whom a purchase order or contract has been placed by a producer or any supplier for

(I) Material to be used for repairs;

(II) Material required for a producer's emergency inventory;

(III) Material to be physically incorporated in other material which is to be used for repairs or which is required for a producer's emergency inventory.

(B) Assignment of preference rating. Subject to the terms of this order, preference rating A-10 is hereby assigned:

(1) To be delivered to a producer of material required by him for repairs or for his emergency inventory;

(2) To deliveries to a supplier of material which is, in turn, to be delivered to a producer for repairs or for his emergency inventory or to be physically incorporated in material to be so delivered.

(C) Persons entitled to apply preference rating. The preference rating hereby assigned may be applied by

(1) A producer;

(2) A supplier, provided that he requires the material so purchased in order to make deliveries duly rated pursuant to paragraph (b).

(D) Application of preference rating.

(1) A producer, in order to apply the preference rating to a delivery of material to him must indorse the following statement on the original and all copies of the purchase order or contract for such material, signed by a responsible official duly designated for such purpose by such producer:

"*Purchase order for repair or emergency inventory-preference rating A-10 under preference rating order P-22.*"

Such indorsement shall constitute a certification to the Office of Production Management that such material is required for the purposes stated therein. Any such purchase order or contract shall be restricted to material the delivery of which is rated in accordance therewith.

(2) A supplier in order to apply the preference rating to a delivery of material to him must indorse the following statement on the original and all copies of the purchase order or contract for such material, signed by a responsible official duly designated for such purpose by such supplier:

"*Purchase order for material required to fill a duly rated order for repair or emergency inventory. This purchase order bears preference rating A-10 under preference rating order P-22.*"

Such indorsement shall constitute a certification to the Office of Production Management that such material is required to fill an order placed by a producer or supplier duly rated in accordance herewith. Any such supplier's purchase order or contract shall be restricted to material the delivery of which is rated in accordance herewith.

(3) A producer or supplier placing any such rated purchase orders or contracts and the supplier selling the material covered thereby, must each retain indorsed copies of such purchase orders or contracts segregated from all other purchase orders or contracts for a period of two years from the date thereof for inspection by authorized representatives of the Office of Production Management.

(E) Restrictions on application of rating. The preference rating hereby assigned shall not be applied.

(1) By a producer to obtain material in excess of his requirements for repairs or for his emergency inventory;

(2) Unless the material to be delivered cannot be obtained when required without such rating;

(3) By a supplier to obtain material in excess of the amount necessary to make rated deliveries.

(F) **FALSE STATEMENTS AND PENALTIES.** Any person who applies the preference rating hereby assigned in wilful violation of the terms and provisions of this order, or wilfully falsifies records required to be kept of information to be furnished pursuant to this order, or who obtains a delivery of material by means of a material and wilful misstatement will be prohibited from further applying said rating. Such person may also be prohibited from obtaining further deliveries of material under allocation and be deprived of any other priorities assistance. The Director of Priorities may also take any other action deemed appropriate, including the making of a recommendation for prosecution under section 35A of the criminal code (18 U. S. C. 80).

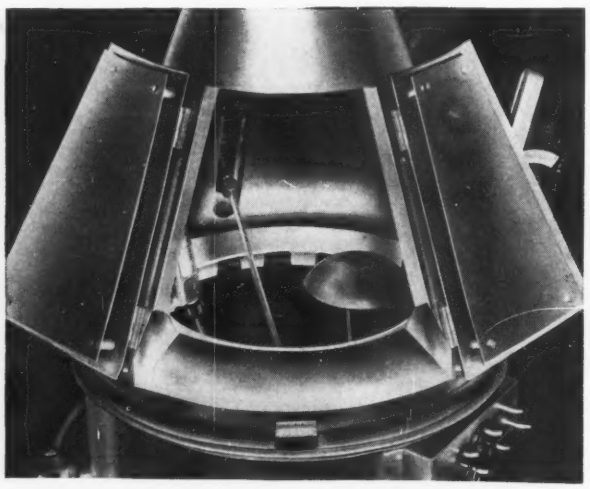
EQUIPMENT *and Supplies*

Improved Remelting Furnace

The accompanying illustration shows a new feature embodied in the latest model of the Big Chief Type Metal Remelter. While it is claimed by United American Metals Corporation that the Duofold aluminum insulation and the Quick-heat muffler reduce fuel consumption radically, the toothed baffle-ring which is now being incorporated in this new model, reduces the fuel consumption still further.

The Quick-heat muffler, also shown in the illustration, captures the surplus heat underneath the pot and passes it up and through the metal to the surface. The heat from the sides which previously has been dissipated through the flue, now comes through the openings of the toothed baffle-ring and is put to work melting the metal from the top. Manufacturer states that as a result of this feature, added to the Duofold insulation and the Quick-heat muffler, practically no heat is wasted which is evidenced by the cool hood while the metal is at its highest temperature.

The Remelter shown here was constructed for the Beaumont (Tex.) *Enterprise-Journal* and is part of a complete remelting unit including a water-cooled ingot mold, a continuous casting trough, a motorized agitator and an automatic temperature control. It is also equipped with internal lighting to facilitate dross reduction and skimming.



View of upper section of recently improved Big Chief Type Metal Remelter. Toothed baffle ring is said to reduce further the consumption of gas.

Mechanical Executives

Are invited to write the Editor of *Printing Equipment Engineer* about some production or mechanical help which has been devised in their plants. In this way the idea may be passed on to others having the same problems you have corrected.

Metco Metallizing Gun

New features for improved operation and application are announced as having been incorporated in the Metco Metallizing Gun, Type 2E. The Gun is intended for building up worn or damaged machine parts. In the printing industry these applications are for rebuilding lithograph cylinders, packing cylinders, water rolls and damaged platens. Other

applications are restoration of bearing surfaces, rolls, shafts, pump rods, press fits, repairing defects in castings and so on, with carbon and stainless steels, bronze, brass, monel metal, nickel and other metals obtainable in wire form. The Metco Gun may also be used for corrosion resistant coatings of zinc,

aluminum, lead and tin to various surfaces.

The metal wire (used as the coating medium) is fed automatically into the Gun at adjustable speed, where it is melted by a concentrated flame, atomized by compressed air and sprayed on any base material. The Gun may be used as a hand tool or as a lathe tool.

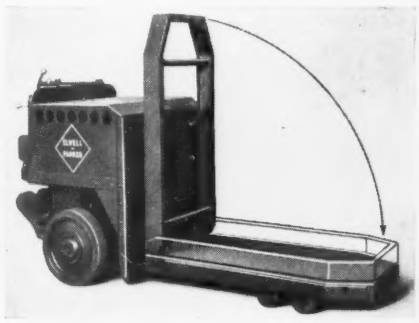
Manufacturer states the Controlled Power Unit provides a steady wire feed, by means of a governor which operates on the power absorption principle, to allow full power input and to eliminate speed fluctuations under varying loads. The Universal Gas Head permits the use of Acetylene, Propane, Hydrogen, Natural or Manufactured Gas with balanced pressure and without the necessity for changing heads.

The complete tool weighs 4¾ lbs.

EP-4 Truck with Super-platform

A recent addition to the platform structure of an Elwell-Parker type EP-4 power industrial truck enables the operator to pick up, transport and place loaded skids having various under-clearances, without wasting time.

The standard height of truck platform is 6 in. above floor, with a 4½ in. lift.



A SURE WINNER!

MERCURY
ROLLERS & BLANKETS

MERCURY Products are truly outstanding in their field. Precision made to the most rigorous specifications, they assure perfect ink distribution and consistently trouble-free performance. There is a Mercury Roller and Blanket to meet the needs of every type of press.

RAPID ROLLER COMPANY
D. M. RAPPORT, Pres. Federal at 26th Street CHICAGO

This permits lifting and handling skids having an under-floor clearance of 7 in. To handle skids of greater height, a hinged frame or superstructure is lowered from its vertical position, increasing the platform height to 11 in. at normal, and 15½ in. when raised.

Thus a single truck with this or a deeper attachment could handle skids varying from 7 in. to 22 in. or even higher, with equal facility. Owners can extend the usefulness of present skids whether for hand or power lift instead of discarding them at once.

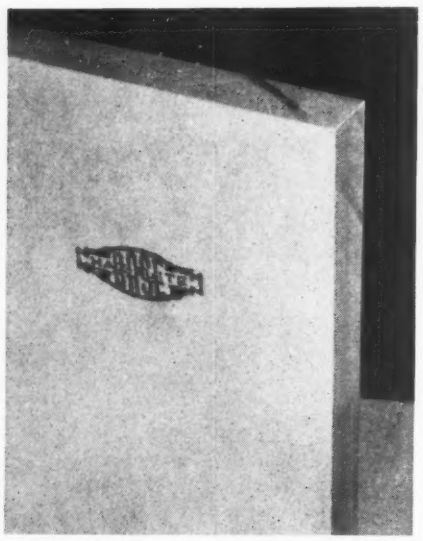
The truck is designed for storage battery operation. Rated capacity is 4000 lb., travel speed under load, 4¾ mi. per hr. Two-wheel drive, 6-wheel steer. An independent motor controls lifting and lowering of platform.

Haz-el-ite Rubber Plate Base

Haz-el-ite is the name of a cream-colored plastic type base developed by The Lockwood-Hazel Printing & Stationery Co., for use in mounting rubber plates while printing from flatbed presses. The base is regularly supplied in sizes 12 in. by 12 in. and 12 in. by 18 in., and in standard thickness of 0.805 in.

It is stated that Haz-el-ite base has been supplied in special thicknesses as a stereotype mat rolling base, and for the mounting of halftones, zinc etchings and other plates. In the latter case, the cuts may be fastened to the base with adhesives now on the market.

Following claims are made for Haz-el-ite Base: (1) The thickness tolerance is plus or minus 0.002 in.; (2) 90% of the usual makeready time is eliminated when using precision rubber plates mounted on the base; (3) Under normal conditions and handling, the base is almost indestructible; (4) The base may be cut to size on a composing room saw with no damage to the saw itself outside of an accelerated dulling; (5) The base will join together in the bed of the press in such manner that plates may be mounted directly over the base joints.



View of section of Haz-el-ite Base for mounting rubber printing plates. Ordinarily the plastic-type base is supplied in height of 0.805 in. and in dimensions of 12 in. by 12 in. and 12 in. by 18 in. Can be cut to size on composing room saw. Thickness tolerance of the base is plus or minus 0.002 in. Said to be practically indestructible under normal conditions and handling.

Lubricates Type Case Runs

American Grease Stick Co. makes a product called Door-Ease, which is used like a crayon to ease type cases and drawers that bind or stick. Door-Ease is a stainless stick lubricant and is put up in a lithographed metallic container, ½ in. diam. by 4½ in. long.

A Chicago typographer applied Door-Ease to the type cases in his plant.

An application of Door-Ease is said to last a long time, because the lubricant is unaffected by weather conditions and will not wash off with plain water.

Door-Ease may also be used in the shop, office, or home on doors, drawers, latches, filing cabinets, windows, zippers, screws, pipe stems, or other articles of metal, wood, glass, plastic or rubber requiring a clean surface lubricant.

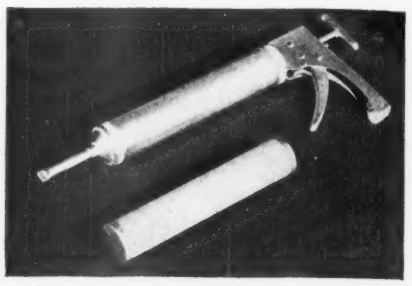
Ink Container

In its September issue, *Printing Equipment Engineer* published an item about a new printing ink container recently adopted by the E. J. Kelly Co. The illustration arrived too late to be printed with the article and is printed here with further explanatory description.

This new container is said to remain air tight no matter how often the cover is removed and replaced. A heavy rolled edge at the top of the can makes for strength and eliminates cut fingers. The deep drawn lid is provided with several "bumps" around the edge which snap over the rolled edge and hold it in place. A molded rubber gasket is fitted into a deep groove in the lid. When the lid is in place this gasket presses firmly against the rolled edge of the can making an air tight fit. The lid is removed by inserting a knife or coin under the edge.

Diamant Ink Gun

The Diamant Ink Gun is a gun-like tool containing a 1 lb. cartridge of ink. The gun is for use in applying controlled amounts of ink to proof presses and platen presses not equipped with automatic inking device. To operate, the plunger handle is twisted slightly and a trigger is pulled to release enough ink for inking-up the press. The flow of ink from the gun may be controlled with the handle. To regulate the amount of ink to be ejected, a set screw on top of the gun may be adjusted to the number of ratchets required by the pull on the trigger. Manufacturer states the gun not only keeps the ink and the operator's hands clean, but also saves 30% of the yearly ink bill and 50% of the time spent in opening and closing ink cans or tubes.



View of Diamant Ink Gun for use in applying ink to proof and platen presses not equipped with automatic ink devices. Cartridge containing the ink is shown in foreground. Cartridge may be filled with any ink customers use.

The used-up cartridges are ejected from the gun for a distance of about 1 in. entirely free of ink after the bottom of the gun is unscrewed from the gun body.

The gun is finished in cadmium.

Manufacturer recommends that where proofs are taken in color it is economical to provide a separate gun for each color.

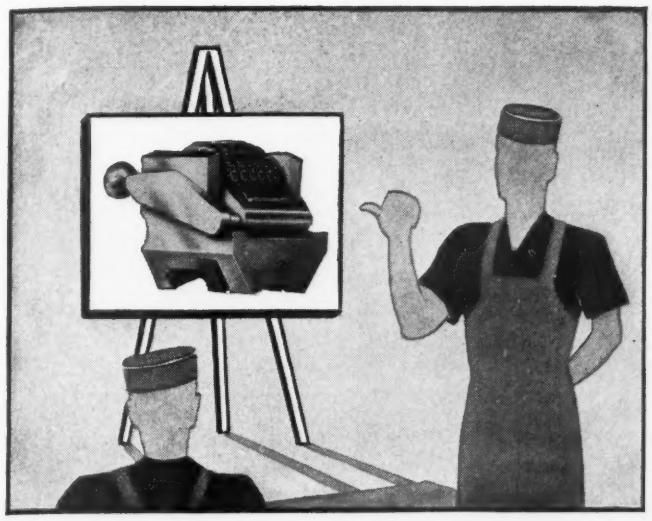
Further information may be obtained from The Diamant Ink Gun, direct, or in care of *Printing Equipment Engineer*.

IPI Essay Contest

Plans to encourage good relations between students throughout the Western Hemisphere by expanding the IPI Essay Contest to include both Latin America and North America were announced this month by Fred J. Hartman, Chairman of the Contest Advisory Committee, and Educational Director of the National Graphic Arts Education Association.

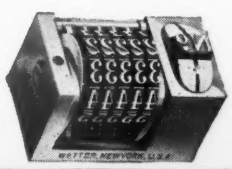
This year's competition, the sixth annual IPI Essay Contest, will have for its theme topic *Printing and American Defense.* In Latin America, the topic will be the same, with the Spanish translation, *La Prensa y la Defensa de las Americas.*

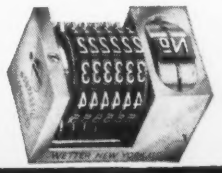
A silver cup will be awarded to the school submitting the best printed essay, but the idea of printing the essays is entirely optional. However, as before, this award is entirely distinct from the judging of the essays from a standpoint of content, and has no bearing on the selection of the national winners.



The Kid learns about *Numbering for Profit* on Rotary Presses

- "What about numbering for profit on rotary presses?"
  - ★ "We number better with a Wetter."
- "What makes Wetter rotary heads better?"
  - ★ "They save lock-up time."
- "Why?"
  - ★ "Easy to lock in place anywhere on the ring."
- "True. What else?"
  - ★ "Easy to adjust closely in position."
- "And then what?"
  - ★ "They've got everything the flat-bed models have."
- "Are they made for parallel or for right-angle operation?"
  - ★ "Both."
- "Fine! Where'd you get all this dope?"
  - ★ "In the shop."
- "No better place—that's where all Wetters shine."





WETTER NUMBERING MACHINE CO.
ATLANTIC AVE. & LOGAN ST., BROOKLYN, N. Y.
Sold by all dealers and branches
AMERICAN TYPE FOUNDERS

807

ZINK CUT CEMENT PRICES in the United States: 75c per large tube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots.

The Major Objective is to Save Time

Essentially, all composing and stereotype executives must supervise their production so as to get the work done in minimum time. One of the ways to save production time is to provide your force with the tools and supplies to do the work in the simplest and speediest manner without unnecessary motion.

BOOTH'S ZINK CUT CEMENT is such an aid. In fact, it's the fastest and most economical cut-mounting means in existence. With it, all kinds of cuts may be mounted to wood or metal base.

BOOTH'S BLACK RUBBER ROLLS for line-composing machine keyboards are made in 15¾ in. and 16 in. lengths. Please specify which length you want when ordering. Tough as a pig's snout. Truly concentric. $1.10 per pair, $6 per dozen.

THE E. A. BOOTH RUBBER COMPANY
364 ROCKEFELLER BUILDING • CLEVELAND, OHIO

EMPLOYMENT
AND SERVICE

Employers, production and mechanical executives may insert notices in this department. Items may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing Equipment Engineer*, 1276 West Third St., Cleveland, O.

SUPERINTENDENT — There's a printing plant that has need for a capable executive with long and successful record in handling production in high-grade and general commercial plants. I can fill that need. Experience includes office routine and customer contact. Reply Box 134.

MACHINIST — Experienced on all types of line-composing and type-setting machines including trade composition. Capable of taking charge of any size battery. Prefer newspaper. Reply Box 135.

Colorful Annual Report

WHAT probably is one of the most colorful Annual Financial Statements, if not the most colorful, ever to have been issued by a printing equipment manufacturer is the one recently issued by the Harris-Seybold-Potter and Subsidiaries for the fiscal year ended June 30. The report consists of a 20 page booklet with cover done in four-color work. The entire booklet was printed by offset-lith on a Harris press.

Inside pages discussing the firm's financial matters are printed in black type with tan screened borders and backgrounds.

Miniature reproduction of striking two-page spread contained in Annual Report to stockholders and employees of Harris-Seybold-Potter Company and its subsidiaries. The financial explanations have been made as elementary as possible through the use of charts.

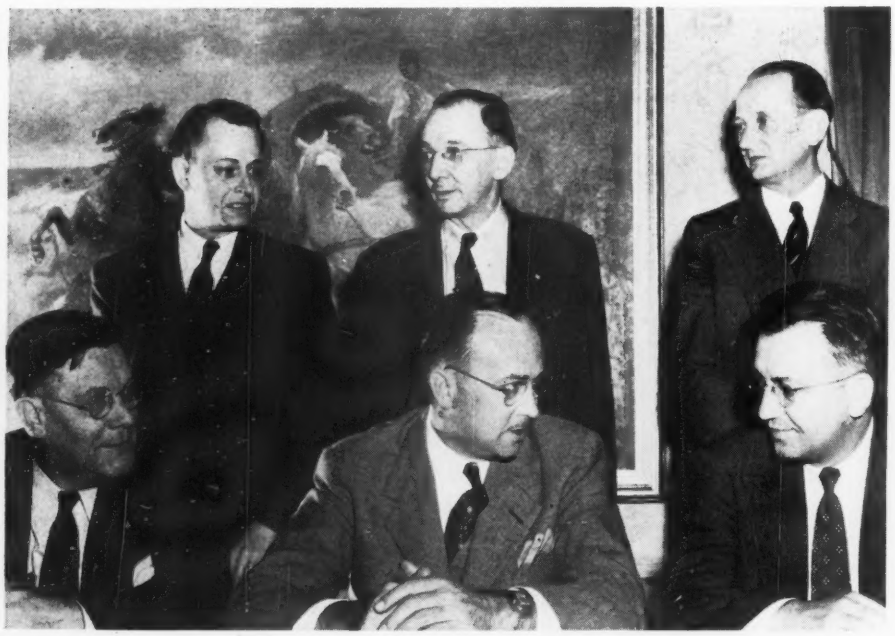
An outstanding feature of the report is that it has been prepared in such a way as to explain in simple fashion to stockholders and employees the company's assets and liabilities; income and expenditures and how used; a segmented dollar showing percentages of expenditures for depreciation, direct taxes, interest and dividends and the portion retained by the company. A two-page chart gives the length of service of employees from 15 to 20 years each. Four illustrated pages are devoted to the products of both the Seybold and Harris Divisions of the company.

In a statement by A. F. Harris, Chairman of the Board, the net profit for the year, after providing for interest on funded debt, depreciation and taxes was $402,683. This amounts to $2.37 per share of common stock after deducting dividend requirements on outstanding preferred stock.

Mr. Harris also discusses defense work being executed by the company as well as relations of the company with its employees.

The usual Consolidated Balance Sheet is presented, followed by simplified explanations of financial dispositions.

Milwaukee-Racine Craftsmen's Club Elects Officers



Recently, the Milwaukee-Racine Craftsmen's Club elected officers. Front row (left to right): First Vice President, Walter F. Zahn of the Zahn Typesetting Co.; President, Victor Schwarze of the Krus Engraving Co.; Second Vice President, Lester E. Oswald, of the E. F. Schmidt Company.
Standing (left to right): Financial Secretary, Lavine P. Jacobson of the Olsen Publishing Co.; Recording Secretary, John Edward Cobb of the Western Printing and Litho Co.; Auditing Committee Member, William H. Arndt of the Western States Envelope Co. Treasurer-elect Andrew B. Fries of the Western Printing and Litho Co., Racine, is not shown here.

Champion's Report

One of the most elaborate annual reports to come to the attention of *Printing Equipment Engineer* is that of the Champion Paper & Fibre Co., for the fiscal year ended April 1, 1941. The report covers operations of Champion's four plants in Hamilton, O.; Canton, N. C.; Houston, Tex., and Sandersville, Ga.

The report consists of 32 pages and cover, approx. 9 in. by 12 in. size, is printed in black and olive drab ink, and is copiously illustrated.

There is a growing trend in industry for management to express company financial, business and personnel operations in elementary fashion so that all company employees can understand what is being done with the money received, what products the company makes, where and how these products are used, the company's development and research program, safety and health work, educational facilities maintained, recreational facilities and elementary explanations showing sound financing.

Innumerable portraits distributed throughout the report show company personnel from the president, through executive group to rank and file employees.

How to select the best **ROUTING CUTTER**

All Royle Routing Cutters reflect advantages gained through more than eighty years in making these tools. Royle offers a complete line of cutters, of sound design, fine materials, and expert workmanship. ***Order direct or through your dealer . . Be sure it's a Royle.*** **Write for catalog 425.**

Choose Style According to Use

Styles	*Blade Sections*	*Recommended for*
A		Electrotypes, stereotypes, wood
B		Zinc
C		Brass
D		Electrotypes and copper
E		Copper (Steel at reduced speed)
F		Zinc (Reinforced blade)
G		Brass (Reinforced blade)
H		Copper (Ground below center)
L		Zinc (Long blade)
M		Wood veining (No taper)

JOHN ROYLE & SONS 8 Essex Street, Paterson, N. J.

Emphasized throughout the report are the factors which make for regularity and security of employment. The importance of stockholder capital to successful operation of the company likewise is stressed. It is shown that $8500 in working capital is required to keep each of the company's employees at work.

Reports like the one issued by Champion are being used with increasing frequency by leading corporations to help in the building of employee morale, to encourage greater employee cooperation and to introduce the spirit of the organization to the large number of employees now frequently being added to the staff too rapidly for the usual orientation. As a final remark we'd like to add it is a pleasure to note that Champion is taking "some of its own medicine" in using a fine grade of engraving and printing upon its own product.

Monotype Bembo

Lanston Monotype Machine Co. announces that matrices have been completed for setting Bembo on the Monotype in 8, 9, 10, 11 and 12 pt. sizes, as have also display matrices for casting type from 14 pt. to 36 pt. for use in hand composition.

It is stated by Lanston Monotype Machine Co. that an analysis of the revivals and adaptations of usable book types will reveal that a surprising number have been produced during the past ten years. Of these revivals, Monotype Bembo

THIS IS 10 POINT BEMBO, NO. 405. IT POSSESSES SOME OF THE FEATURES OF both Caslon and Garamont, although its *Design Is More "Trued Up" Than Either. It can be printed equally well on a variety of the*

BEMBO IS a new letter

Specimen of Monotype 10 pt. Bembo No. 405 with companion Bembo Italic (Aldine Bembo). Specimen hand-set cap and lower case lines of Monotype 36 pt. Bembo.

(Series No. 405) is comparatively new in America.

While having an affinity for earlier Roman letters, the design is not a copy of either, but is based on characters cut about 1490 by Francesco Griffo, an Italian. Bembo is not as archaic as most revivals, but is more uniform in general shape and alignment. Actually, it is a fifteenth century letter adapted to twentieth century reading requirements.

The italic form is called Aldine Bembo. The degree of inclination is fairly slight, the lower case design is more caligraphic than the capitals, and therefore, is more reminiscent of its pen-drawn ancestry.

Specimans of all sizes of Bembo will be sent by Lanston Monotype Machine Co. to all those asking for them.

S.N.P.A. (Eastern Div.) Executive Committee

The corrected personnel list of the S.N.P.A. Eastern Div. Mechanical Executive Committee is printed below together with date of expiration of term:

1942

Claude L. Baker, New Orleans (La.) *Times-Picayune & States*

E. O. Aslinger, Greensboro (N.C.) *News-Record*

W. B. Astor, Jr., Memphis (Tenn.) *Commercial Appeal*

1943

Henry M. Duke, Charleston (S.C.) *News & Courier* and *Post*

H. R. Capps, Jacksonville (Fla.) *Times-Union*

I. J. Gardner, Jr., Chattanooga (Tenn.) *Times*

1944

E. A. Van Norden, Atlanta (Ga.) *Journal*

Harry Wilson, Birmingham (Ala.) *News and Age-Herald*

C. Frank Mann, Louisville (Ky.) *Courier-Journal* and *Times*

Secretary-Manager Walter C. Johnson, Southern Newspaper Publishers' Association, P. O. Box 1569, Chattanooga, Tenn.

CHROMOLOX UNITS

for Linotype Electric Pots

Have attained widespread use because one unit instead of two allows:

1—EASIER INSTALLATION
2—TOUGHER CONSTRUCTION
3—LONGER LIFE
4—GREATER EFFICIENCY

Price $30.00

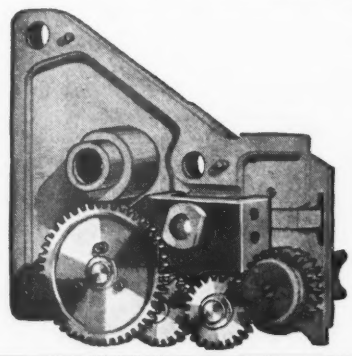
About **COOK SLOW-SPEED ASSEMBLER UNITS**— *here's what they say:*

"Please enter our order for two additional Cook Slow Speed Assembler Units for Linotype. The first one of these we installed on a Model 14 machine and it has made such a remarkable improvement that we contemplate putting them on all machines.

P.S. *They have!*

(Made in Slow or . . . Intermediate Speed)

PRICE $12.50



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DENVER 1441 Blake St.

KANSAS CITY 314 West 10th Street

PRODUCTION CONTROL

(Continued from Page 21)

the editors know how much type they can expect from them. If operators are out of copy for any length of time the editors know that so much less type will be set and have no one but themselves to blame if the edition is late or there is not enough type to fill.

A system of lights is used at the copy desk with colors to designate the condition of the editorial hook. A white light indicates plenty of "hot" copy; the green light that the hook is running low, and the red light indicates operators are completely out and are standing around looking for work.

This system has eliminated the use of a copy cutter. The head man sets the heads, puts head type with copy and the operator keeps it together, dumping both heads and news type at once. The dump man has little to do except proof up type and correct it.

Because there is a steady flow of copy, makeup confusion has been stopped. Instead of gauging up the pages to the stereotypers an even flow goes to that department. All this is accomplished with fewer makeup men.

Another cost savings device is the reduction of many editions. The afternoon paper has but one edition and the morning paper has only one. Some papers are trucked but in running only one edition, deliveries are always on time and seldom is there a makeover. That, too, reduces costs.

An interesting sidelight is that no advance feature copy is set. Everything that goes into the editions is set on live time from day to day. A feature for the following day may be set after the edition the preceding day but there are no "gobs" of advance matter set days or weeks ahead to fill in operator standing time.

Going back to the so called fence between news and ad departments in the composing room, an interesting point is that an advertising operator is never called over on news to help out in the rush period. There is no rush period because copy flow is pre-determined.

Mr. Mintun was asked: "Do arguments ever arise?" "Oh, yes!" said he, "they argue and quibble but there is an unwritten law in the plant that 'they all can get sore but never mad.' They may have trouble at times but are always friends at the day's end."

An executive wanted to know: "Now what about the printers?" "Well," answered the speaker, "ask any man who has bucked the slipboard how he feels when he is assured of a situation. They all like it and it pays dividends. He knows because there isn't a composing room in the state where the morale of the men is any higher than it is in Decatur."

The advertising is handled much the same so far as deadlines are concerned. Its volume is based on contracts and is pretty well spread out in frequency of insertions.

Newspaper Deadlines

Press and Stereo Superintendent, Howard Colton, discussed newspaper deadlines and presented a word picture showing how the Bloomington *Pantagraph* works on a schedule and adheres to it strictly.

First of all, the speaker stated he felt mechanical executives have not been able to put across clearly the full meaning of the word deadline to the advertising and editorial departments.

Non-observance of deadlines is extremely costly in newspaper production. Some of the things causing abnormal expense in paper delay were enumerated by Mr. Colton as follows: (*a*) Missing the mail trains and buses, necessitating the additional expense of trucking. (*b*) Causing subscriber dissatisfaction in late deliveries and sometimes total delivery failure on the day of publication, such as on rural routes. (*c*) Overtime for printers. (*d*) Not sufficient time for photographers and engravers to do required work on their products. (*e*) Lack of time to properly make up and print the newspaper.

He explained in detail the correlative measures maintained at the *Pantagraph* to provide team work between all of the business, executive, advertising, editorial and production departments. At the meeting of departmental executives, any lapses or negligence in maintaining the previously determined schedules are brought out in the open and corrected.

PRINTING PATENTS REPORT

Covering Patents Issued August 26, Sept. 2, Sept. 9, Sept. 16, Sept. 23

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine.

For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,254,165. BINDING HAND TOOL by means of which tubular, elastic binders clips may be quickly and easily forced open and applied to stacks of edge-punched sheets, whereupon the clips spring back to original form and thereby bind the sheets in book form. Invented by Clarence E. Brooks, Norristown, Pa. Assigned to The Philadelphia Bindery, Inc., Philadelphia, Pa. Application January 8, 1941. 8 claims.

Composing Room Equipment:

2,254,689. PRINTER'S LAYOUT TABLE having an illuminated transparent surface and provided with means for accurately designing the layout of a printed sheet so that the type may be set up for printing. The table has an improved movable rule set by a micrometer with pica indicating markings. Invented by Harry N. Livingston, Johnson City, N. Y. Unassigned. Application December 29, 1938. 4 claims.

2,255,254. SLUG-CASTING MACHINE having a pair of line clamping jaws movable towards each other in quadding, and an automatic mechanism independent of the line for operation of the jaw in expanding or squeezing the line. Under one condition the mechanism is operable to move the jaw outwardly a limited distance from its line contacting position to permit the line to be expanded by spacebands to a corresponding extent, and under another condition to urge the jaw inwardly to squeeze the line. Invented by John H. Hilpman, Springfield Gardens, N. Y. Assigned to Mergenthaler Linotype Co., Brooklyn, N. Y. Application August 3, 1940. 43 claims.

2,255,590. TYPOGRAPHICAL SLUG-CASTING MACHINE of the type equipped with a plurality of molds differing in size, having an automatic device arranged to show markings on a registering means so as to give the machine operator a direct visual indication of the point-size (body thickness) and the em-length of the slug that will be produced in the casting slot of each of the several molds ordinarily provided for selective use on the modern commercial machines of this class. Invented by Robert M. O'Connor, Warren, Ohio. Unassigned. Application March 18, 1941. 8 claims.

2,255,949. DRAWER STRUCTURE FOR TYPE CASES having a novel runner shoe comprising an elongated member of channel formation, particularly suited for type cases having a heavy load of type. (See Patent No. 2,255,950, following.) Invented by Edward J. Thompson, Ludington, Mich. Assigned to Thompson Cabinet Co., Ludington, Mich. Application June 24, 1941. 7 claims.

2,255,950. RUNNER SHOE FOR TYPE CASE DRAWERS comprising an elongated member of channel formation, embracing a portion of the side piece of the drawer and having at its upper portion a laterally disposed flange extending inwardly of the shoe to engage in a groove in the side piece of the drawer. Invented by Frederick C. Shelters, Ludington, Mich. Assigned to Thompson Cabinet Co., Ludington, Mich. Application June 24, 1941. 9 claims.

Feeding, Folding, Delivery:

2,255,083. SHEET SPACING MACHINE which eliminates "Geneva" or reciprocatory type of intermittent movement and substitutes a true rotary motion for feeding the blanks into the spacing device. The invention comprises a simplified form of rotary sheet-spacing mechanism in which a pile of sheets are removably supported in a holder. The forward end of the lowermost sheet is seized upon its underside by an oscillating suction arm and lowered into the bights formed by a pair of upper roller segments with a lower elongated roller. Invented by Charles F. Pflanze, University City, Mo. Unassigned. Application July 27, 1939. 15 claims.

2,255,084. SHEET SPACING MACHINE which eliminates the objectionable "Geneva" or reciprocatory type of intermittent movement and substitutes therefor a true rotary motion for deeding the blanks into the spacing device, thereby reducing the wear and vibration on the machine. Invented by Charles F. Pflanze, University City, Mo. Unassigned. Application July 6, 1940. 6 claims.

2,255,777. MACHINE FOR ASSEMBLING manifold sets or groups of sheets of writing paper from one pile with carbon paper from another pile, in which the carbon paper and the writing paper are interleaved and in which an adhesive is used to secure together the separate sheets of each set. The adhesive is applied to the sets as they are assembled, and the assembling of successive sets can be continuously carried on without the successive sets sticking to each other. Invented by Harry S. Jones, Chicago, Ill. Unassigned. Application January 30, 1939. 21 claims.

2,256,823. FLUID OPERATED SIDE-LAY MECHANISM for sheet feeding machines wherein sheet gripping means are caused to shift laterally for drawing each sheet against a guide to effect side registration. Present invention has improved means for actuating the sheet gripper and is provided with flexible connections for applying force through a column of fluid to bring about the desired movements of the gripper. Invented by Alfred P. Battey, Eastcote, England, and Headley T. Backhouse, London, England. Said Battey assignor to said Backhouse. Application October 12, 1940. 6 claims.

Miscellaneous:

2,253,681. COMPOSITION useful in the preparation of printing and lithographic inks, prepared by the simultaneous reaction of a mixture containing fumaric acid, an alcohol, and a conjugated terpene of the $C_{10}H_{16}$ series, modified with a mixture of drying oil fatty acids and drying oils. Invented by Theodore F. Bradley and William B. Johnston, Stamford, Conn. Assigned to American Cyanamid Co., New York, N. Y. Application April 5, 1939. 21 claims.

2,254,072. PRINTING INK PREPARATION, based on the discovery that very finely divided plastic materials, notably those possessing thermoplastic characteristics, may be suspended in solid state in ink compositions to provide materials which are of high fluidity, yet contain high percentages of solids. Thus, the ink does not dry on the presses, yet when the imprinted surface is heated to a slightly elevated temperature, and a part of the solvent is absorbed, the plastic material out of suspension

(*Continued on Next Page*)

When we think of National Defense, we usually think of

Many of us also think of

Photo-engravers, too, play a part by supplying the

. . . And for quick clean etching and uniform texture, the majority of American photo-engravers specify . . .

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AND

A-Z ELECTRIC ALLOY

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Pacific Coast Representative
RALPH LEBER CO.,
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SEATTLE, WASH.

leaves a non-smudging imprint. Invented by John D. Jenkins, Wilkinsburg, Pa. Assigned to The Pittsburgh Plate Glass Co., Allegheny County, Pa. Application October 5, 1939. 9 claims.

2,256,921. MAKE-READY UTILIZING A LAMINATED MAT with its laminations held in position by a temporary bond permitting the bodily removal of cut-out pieces from one or several laminations, as indicated by the impressions upon the face of the laminations made by a plate. The mat, made by bodily removing cut-out portions, is then subjected to a treatment changing the bonds between the laminations from temporary to permanent bonds. Invented by Homer L. Bishop, Dayton, Ohio. 50% assigned to Earl E. Hansell, Middletown, Ohio. Application March 17, 1939. 6 claims.

DESIGN No. 129,613. ORNAMENTAL DESIGN for a font of type. Invented by Warren Chappell, New York, N. Y. Assigned to American Type Founders, Inc., Elizabeth, N. J. Application June 23, 1941.

Plate Making:

2,254,298. METHOD OF CONDITIONING METAL CYLINDERS of lithographic and printing presses, which uses as a coating material, a base lacquer coating followed by a coating of pigmented lacquer, to protect the surface of the cylinder from the corrosive effects of inks and other materials as well as air. Invented by Charles W. Latham, Maspeth, N. Y. Assigned to Smart Platen Process Co., Inc., Brooklyn, N. Y. Application February 23, 1940. 10 claims.

2,254,807. COOLER FOR PHOTO-MECHANICAL PRINTING PLATES, comprising a receptacle filled with water, over the surface of which a thin membrane is stretched. A motor driven propellor circulates the water in the receptacle. The plate to be cooled is placed on the membrane and the circulation of the cooling liquid cools it in an average of 12 to 14 seconds. The provision of the membrane insures cooling without wetting of the plate. Invented by Frank T. Powers, Glen Cove, N. Y. Unassigned. Application September 7, 1940. 5 claims.

2,255,018. STEREOTYPE PLATE FINISHING MACHINE which removes any foreign matter from the plate by a blast of air as the plate enters the shaving arch. Water may be directed on either or both sides of the plate after it is delivered into the cooling stand and means are provided for blowing the water off of the plate before it is sent to the press. Invented by James F. Wilson, West Philadelphia, Pa. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Application December 17, 1938. 7 claims.

2,256,449. METHOD OF REMOVING A PRINTING IMAGE from an aluminum lithographic or planographic printing plate without destroying the grain of the plate, by treating the plate with sulphuric or phosphoric acids or a mixture of them in the presence of chromic acid. This supersedes the conventional method of washing the plates with a solvent and regraining them. Invented by Anthony George, Cincinnati, Ohio. Assigned to The Lithographic Technical Foundation, Inc., New York, N. Y. Application December 6, 1938. 1 claim.

2,256,777. PROCESS FOR UNIFORMLY COATING a metal cylinder with a light sensitive colloidal layer for the photomechanical manufacture of printing forms, in which the metal cylinders, previous to being coated, are brought to the same or approximate temperature as the light sensitive liquid which is to be applied. This is accomplished by dipping the uncoated cylinder in warmed water or other liquid, and turning it in the latter until it has assumed the temperature of the water, whereupon it is removed from the warer. The preheated cylinder is then coated with the light sensitive layer of colloidal liquid by rotating the cylinder at an adjusted velocity with respect to the viscosity of the colloidal liquid and to the maintained temperature, so that the coating dries at once without draining back over succeeding portions. Invented by Robert Kaulen, Leovenich, Germany. Assigned to Eden, A. G., Zurich, Switzerland. Application June 3, 1937. 1 claim.

2,256,825. APPARATUS FOR CURING AND DRYING photolithographic or photoengraving plates in preparation for service, which is claimed to distribute uniformly the sensitizing solution on the surface of the plate. This is accomplished by an oscillating heating unit which uniformly dries and bakes the solution over the entire expanse of the plate body as it is rotated by a supporting device. Invented by Joseph A. Christman, Pittsburgh, Pa. Unassigned. Application May 23, 1940. 6 claims.

Printing Presses and Equipment:

2,255,056. DEVICE FOR REMOVING STATIC ELECTRICITY from paper while it is being printed, comprising a heating element and a blower, adapted to blow heated air aganist the paper. The heater is designed for mounting on a printing press and also serves as a drying means for eliminating offsets. Invented by Ottwin Hofer, Lennox City, S. Dak. Unassigned. Application May 20, 1940. 5 claims.

2,255,410. INK DISTRIBUTING DEVICE for the process using hot melt ink, in which the hollow inking rolls are heated by means of a hot liquid circulated therein, to maintain the surface of the rolls at substantially uniform temperature lengthwise. Device also includes means for draining the liquid from the shaft around the tube and means for heating the liquid. Invented by Lynn B. Case, New Brunswick, N. J. Assigned to The John Waldron Corp., New Brunswick, N. J. Application September 23, 1939. 4 claims.

2,256,514. HIGH-SPEED ROTARY RELIEF PRESS of the type used for multicolor printing, having a novel inking mechanism adapted to be used with exceedingly quick drying inks, to avoid drying of the sheets between subsequent color impressions. A scraper regulates the amount of ink removed from the fountain by the drum. The inking drum presents the ink as a film for only a short distance, and the ink is then transferred to the printing surface of the plate by form rollers. The rollers and drum are enclosed at the side to reduce air circulation and thus retard drying of the ink between color applications. Invented by Martin W. Brueshaber, Chicago, Ill. Assigned to Goss Printing Press Co., Chicago, Ill. Application November 12, 1938. 3 claims.

2,256,515. ROTARY PHOTOGRAVURE PRINTING PRESS of the type using quick drying ink, equipped with a novel air blower attached to the ink fountain to draw off the dangerous vapors created by the quick drying of the ink. The blower aerates the ink fountain before and after it is opened. Invented by Martin W. Brueshaber, Chicago, Ill. Assigned to Goss Printing Press Co., Chicago, Ill. Application May 31, 1940. 5 claims.

2,256,800. WEB PRINTING ROTARY PRESS which prints repeat impressions at predetermined intervals within a wide range on a traveling web by means of a novel method, whereby the printing couples may be replaced by other couples having impression and form cylinders of a different size. The replacement of couples is effected with a minimum number of adjustments and without disturbing either the drive for the couples or the drive for the form rollers of the inking mechanism. Invented by Howard M. Barber, Pawcatuck, Conn. Assigned to C. B. Cottrell & Sons, Co., Westerly, R. I. Application December 23, 1939. 16 claims.

2,256,801. ROTARY PRINTING PRESS having manually operated means whereby the change form cylinder of a printing couple may be adjusted both rotatively and endwise, either while the press is running or at rest, so that the form on the cylinder may be brought into both longitudinal and lateral register with respect to the web, easily and quickly. Invented by Howard M. Barber, Pawcatuck, Conn. Assigned to C. B. Cottrell & Sons, Co., Westerly, R. I. Application January 8, 1940. 6 claims.

(*Continued on Page 38*)

AVERAGE: 350 to 400 lines of composition *per hour!*

With TELETYPESETTER, the Perforator shown above prepares tape for Operating Unit attached to composing machine. Users report production cost savings up to 50% on straight matter. If you want more type in less time, send for free booklet. Write to:

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COLOR IN DESIGN.. assumes an ever increasing importance in today's merchandising picture. We have facts and figures which you will find helpful and profitable. Send for them.

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A PLUS PLAN OFFENSE IS YOUR *best* DEFENSE *against metal trouble!*

● In war, football and in every-day life—a good offense is the best defense. And Imperial's Plus Plan is *your* best defense against that ever-present threat of type metal trouble.

Imperial offers free periodic metal analysis to determine the condition of your metal and the Plus Plan operates to prevent troubles *before they happen.* A metal supply that is out of balance casts at temperatures higher than the economical minimum. Such higher temperatures require more fuel, cause greater dross losses and metal at these higher temperatures creates frequent machine and metal troubles.

But Plus Plan control keeps the metal *in balance.* Vital elements are replaced in correct proportion as fast as they are removed in the dross. That is an active, ever-present offense—and it's your best defense against metal trouble. Have you checked your metal lately?

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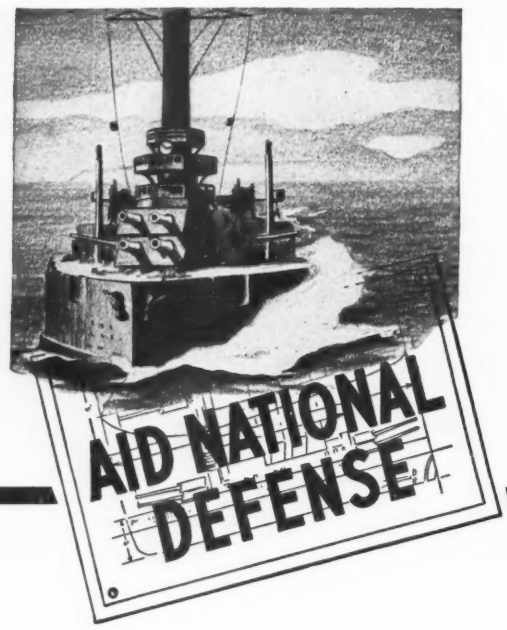

1. Do not hoard engraving metal in finished or scrap form.
2. Sell scrap for the legal maximum or less.
3. Urge customers to dispose of old cuts *now*.
4. Order only standard sizes and gauges of engraving sheets.
5. Schedule orders well in advance to allow mills to schedule production.

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EDES ENGRAVING METALS
Regular Zinc
Hard Matrix Zinc
Triplemetal
Copper
Brass
Gravure Sheets

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BUFFALO: C. S. Illingworth
DETROIT: Eaton-Clark Co.
CINCINNATI: G. C. Dom Supply Co.
AKRON: Metzger Photo Supply Co.
SAN FRANCISCO: J. W. Feinstein
ATLANTA: Chemco Photoproducts Co.
DENVER, MINNEAPOLIS, TULSA, WICHITA, MEMPHIS, DALLAS, OMAHA, KANSAS CITY, OKLAHOMA CITY, DES MOINES, HOUSTON, SAN ANTONIO — Thompson-Hayward Chemical Co.

2,257,010. AUTOMATIC GAS HEATER FOR PRINTING PRESSES, wherein the burners are positioned to the front and to the rear of the extension delivery. Possibility of smudging the printed surface is reduced because the paper is heated twice and is dried to a degree heretofore unobtainable with the usual one point heating arrangement. The invention also provides a novel arrangement for controlling the burners. Invented by William R. Hildebrand, New York, N. Y. Unassigned. Application April 23, 1939. 1 claim.

REPORTS - SEARCHES - MARKETING — PATENT ATTORNEYS — INVENTION, INC. — RESEARCH ENGINEERS

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC. Barrister Bldg., Washington, D. C.

EQUIPMENT

SALES

Recent Linotype Installations

Eleven Blue Streak Linotypes have been added by the Jersey City Printing Co., Jersey City, N. J. The Kantin Printing Corporation, New York, N. Y., has installed five Linotypes. One machine has been added by the M & L Typesetting and Electrotyping Co., Chicago. The Iowa City (Ia.) *Daily Iowan* has added three Linotypes. One or more Linotypes, many of them with self-quadders, thermoblo mold coolers and micro-therm heat control, have been installed by Byron S. Adams, Washington, D. C.; Chief Printing Company, Evanston, Ill.; Westerfield-Bonte Company, Inc., Louisville; Plough Printing and Box Company, Memphis; *L'Avenir National*, Manchester, N. H.; Napa (Calif.) *Register;* California *Eagle*, Los Angeles; *Orange County News*, Ahaheim, Calif.; Pacific Typesetting Company, Seattle; *Russell County News*, Jamestown, Ky.; Quality Press, Santa Cruz, Calif.; Burbank Unified School District, Burbank, Calif.; *Valley Citizen*, Valley View, Pa.; Spencer Magnet, Taylorsville, Ky.; Clark County Press, Inc., Jeffersonville, Ind.; Greenfield (Ind.) *Reporter;* Demopolis (Ala.) *Times; Macon County Times*, Lafayette, Tenn.; *Holmes County Advertiser*, Bonifay, Fla.; Radford (Va.) *Evening Star;* Bridgeville (Pa.) *News; Carroll News*, Hillsville, Va.; Abend Typograph Company, New York, N. Y.; Mitchell (S.D.) *Daily Republic;* Columbia (S.C.) *State;* Ellisville (Miss.) *Progress-Item;* Bristol (Conn.) *Press;* Gospel Publishing House, Springfield, Mo.; Texas Long Horn Printing Company, Austin; Quanah (Texas) *Tribune-Chief; Daily Racing Form*, Los Angeles; St. Louis *Star-Times;* Baraboo (Wis.) *News and Republic;* Wilson Stationery and Printing Company, Houston; Rock Hill (S.C.) *Evening Herald;* Mexico (Mo.) *Ledger;* Owosso (Mich.) *Argus-Press;* McQuiddy Printing Company, Nashville; Central Prison Print Shop, Raleigh.

Wood Machinery Sales

Recent sales of stereotyping machinery are reported by the Wood Newspaper Machinery Corporation, Plainfield, N. J., as follows: Seven Heavy-Duty Autoshavers to the Chicago *Tribune*, one Heavy-Duty Autoshaver to the Atlanta (Ga.) *Journal*, one Heavy-Duty Autoshaver and two vacuum equipments for Junior Autoplates to the Washington (D.C.) *Evening Star*, one Standard Autoshaver to the Washington (D.C.) *Post*, one Standard Pony Autoplate complete with vacuum equipment to the Beverly (Cal.) *Times*, two vacuum equipments for Junior Autoplates to the San Antonio (Tex.) *Express*, one vacuum equipment for a Pony Autoplate to the Charleston (W.Va.) *Gazette*, one vacuum equipment for a Junior Autoplate to the Birmingham (Ala.) *News* and *Age-Herald*, one Standard Pony Autoplate complete with vacuum equipment to the Newport (R.I.) *News Daily Press*, one vacuum equipment for a Pony Autoplate to Triangle Publications, Inc., Chicago, one vacuum equipment for a Pony Autoplate to the Honolulu (H.I.) *Star Bulletin*, and one Standard Pony Autoplate to *Publicaciones Herrerias*, Mexico City.

New Corona Combination

Mergenthaler Linotype Company announces the availability of 7½ point Corona with Gothic matrices.

"As previously stated," says Vice President C. H. Griffith, "Corona offers a higher unit count than many faces of comparable size, but still is not at all a condensed face. This will recommend Corona to newspaper executives who want maximum legibility along with a saving of space."

HERE is a brief showing of 7½-point Linotype Corona with Gothic. Modern man cannot be served by a tool **HERE is a brief showing of 7½-point Linotype Corona with Gothic. Modern man cannot be served by a tool**

Presented here is a brief showing of 7½ pt. Corona with Gothic on 8 pt. body.

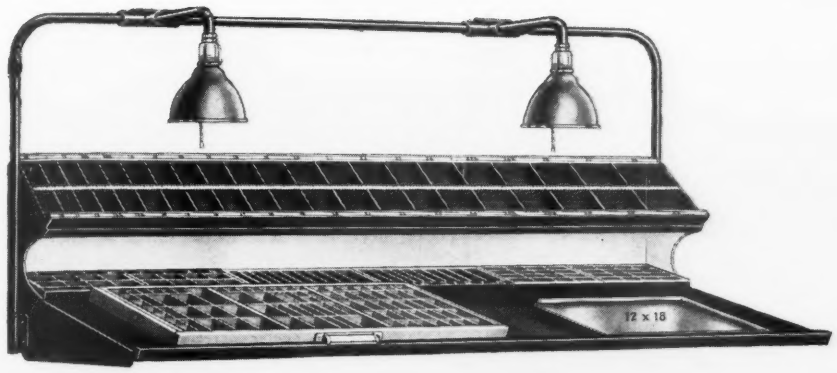
New Location

I. U. Vickers announces that Vickers Composition Company has moved from 10 Mill St. to a new address at 45 Cross St. in Paterson, New Jersey.

October Waste Paper Prices

To members and others using the Cleveland Typothetae Waste Paper Service, prices for waste paper stock collected during October are as follows:

Clear hard white stock	$1.80 cwt.
White, hard and soft mixed	1.65 cwt.
All mixed printers' waste	.45 cwt.
News blanks (white)	1.00 cwt.
Overissue news	.50 cwt.
Manilla shavings	.82½ cwt.
Wrappers	.85 cwt.



CONVERT
Non-Productive Space Into WORKING Space
by Adding a Hamilton Working Top to Your Flat Top Type Cabinet

No. 12142 (above)

For converting a double tier flat top type cabinet into a working top cabinet, we suggest the No. 12142 Top shown above. A full-size type case and 12 by 18-inch galley are shown on the working surface. Spacing materials cases and Lead and Slug Cases available to fit. Also 12 other designs or working tops to choose from.

Here is a simple way to increase the effective working space in your composing room: Add a Hamilton Working Top to your flat top type cabinets and convert them into working space for your compositors. Tops are available for single tier cabinets or double tier cabinets . . . and you can add them at any time. It is a good way to provide extra working facilities without increasing floor space. Send in the coupon for full information on the 13 different styles of working tops available.

HAMILTON MANUFACTURING CO.
Two Rivers, Wisconsin

Send No. 22 Catalog showing Working Tops and Type Cabinets.

SIGNED .....
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HAMILTON MFG. CO.
TWO RIVERS • WISCONSIN

HAMILTON
PRINTING PLANT EQUIPMENT

NEW!
"FOTO-TAPE"
2 - NEW PHOTOGRAPHIC MASKING TAPES

Furnished either in Opaque Black or Translucent Red. Each fully non-actinic and suitable for contact or projection printing. Red FOTO-TAPE is unexcelled for "visibly" masking-down negatives . . . FOTO-TAPE is self-adhesive — sticks instantly—free from pinholes—remains flat — waterproof — will not lift surfaces of print papers—flexible — leaves no deposits.

- *Each color in following sizes:*

¼ inch by 10 yds.
½ inch by 10 yds.
1 inch by 10 yds.
½ inch by 60 yds.
1 inch by 60 yds.

"Free sample on request"

EASTERN NEWSPAPER SUPPLY
9603 NORTHERN BLVD. • CORONA, N. Y.

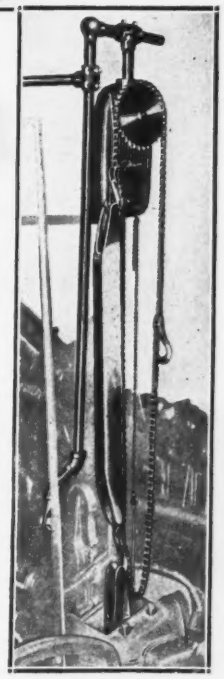
Here comes Mr. Jordan!

WE MEAN THE

Jordan

continuous type-metal
FEEDER

For the Linotype, Intertype, Ludlow, Elrod, Monotype, Monotype Material Maker



A self-actuating feeder. No need to pull back the chain whenever a new pig of metal is to be attached. Pigs do not overlap, therefore can not jam in the metal-pot. Pigs feed down in exact amount of metal cast regardless of whether light or heavy slugs are being cast. Pig will not drop suddenly to bottom of pot as sometimes occurs with the old-style type-metal feeders.

The Price $75

Tell us the type of machine on which you want to install continuous feeding and we will ship you a Jordan Feeder with the proper support, ready to be attached in a few minutes by your machinist or operator.

United American Metals Corporation
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785 Bryant St., San Francisco, Cal. 2248 E. 25th St., Los Angeles, Cal.

$$$$$$$$$$$$$$$$$$$$ **SAVINGS** $$$$$$$$$$$$$$$$$$$$

One Dollar buys more SUPERIOR GLUTEX PACKING FELT
"THE TRADES' FINEST PACKING"

168 inches SUPERIOR PACKING FELT 18" X 28" sheet @ 15c each cost

90¢

1 sheet	2 sheets	3 sheets	4 sheets	5 sheets	6 sheets
28" 15c	56" 30c	84" 45c	112" 60c	140" 75c	168" 90c

168 inches OTHER BRANDS PACKING 18" X 24" sheet @ 14c each cost

98¢

1 sheet	2 sheets	3 sheets	4 sheets	5 sheets	6 sheets	7 sheets
24" 14c	48" 28c	72" 42c	96" 56c	120" 70c	144" 84c	168" 98c

8c SAVING on every six sheets of SUPERIOR

Write for Discount Sheet on Large Orders

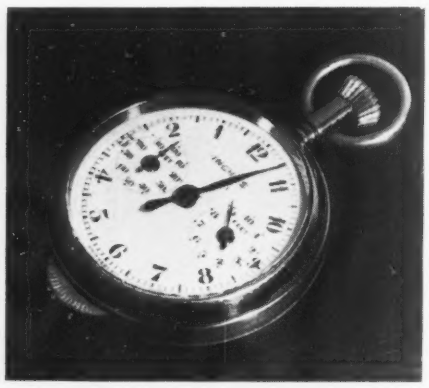
Samples on Request

AMERICAN PUBLISHERS SUPPLY

P. O. BOX 131 WEST LYNN, MASS.

For Measuring "Dupes"

An improvement in the means for measuring type matter set by an operator has been found by Mechanical Superintendent Paul Porter of the Dothan (Ala.) *Eagle*. Where any quantity of proofs must be measured regularly, the map measuring instrument shown in the illustration will save considerable time over the older method of using a rule fastened to a desk or table top.



Mechanical Superintendent Paul Porter of the Dothan (Ala.) Eagle *finds this K.& E. map measuring instrument a quick means for measuring operators' "dupes."*

The instrument is the size of a watch. The large dial is graduated in inches. The small dial at the right is graduated and will record up to 10 ft. The dial at the left records up to 100 ft. To reset the hands on the dials to zero, the knurled knob at the top of the stem is depressed. When the knurled knob is depressed the hands instantly return to zero.

The tracer wheel at the bottom of the case is placed at the bottom of the proof to be measured. Rotation of the tracer wheel lengthwise from bottom to top of the proof causes the gearing inside the case to rotate the hands according to the number of inches and feet traversed by the tracer wheel.

The Keuffel & Esser map measuring instrument may be obtained at engineering or artist's supply stores. The instrument is supplied in 25 ft. and 100 ft. measuring capacities.

Cameron Expands

The Cameron Machine Company, Brooklyn, N. Y., has announced that plans are being drawn for a $100,000 extension to the company's assembly floor.

This extension is made necessary by the demand for machines used in paper mills, paper converting plants, also in the fabric and rubber industries for slitting materials.

PHOTO-LITHOGRAPHERS

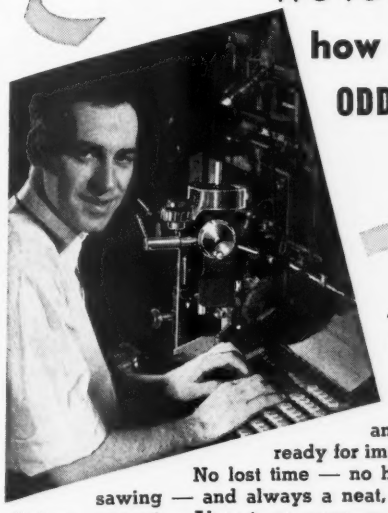
(Continued from Page 17)

representation, and unfair trade practices, we are making efforts to solve the problem of how to sell at a profit."

Mr. Soderstrom feels in view of the difficulties overseas, the Federal Government may take certain definite steps, the setting up of which will affect vitally every offset-lith plant in the country. He expressed his sincere conviction that the association should strengthen its position (1) By increasing its membership, (2) By strengthening the ties of trade association relationships in order to take advantage of closer cooperation with associations in fields related to the offset-lith industry, and (3) Press onward in the concerted activities in which the N.A.P.L. has made steady gains.

Mr. Soderstrom concluded his report by stating that 28 firms had become new members of the association.

We've learned how to speed up ODD-MEASURE jobs



"Yes sir! We use the MOHR Saw. It automatically saws each slug to the desired length as it comes from the linecasting machine and deposits it in the galley ready for immediate make-up."

No lost time — no headaches — no hand slug sawing — and always a neat, perfect fitting job. Simple, efficient, accurate. Almost as easy as straight run composition. Let us show you what it means to have

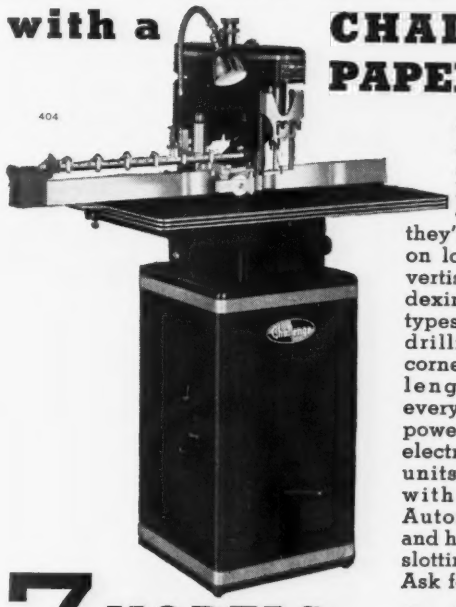
FREE! *This interesting booklet, "Short Cuts With Odd Measures," shows how odd-measure composition can be handled with greater efficiency and at lower cost with the MOHR SAW. Write for your FREE COPY today.*

100% AUTOMATIC SLUG SAWING

MOHR SAW

MOHR LINO-SAW CO.
128 N. Union Ave., Chicago, Ill.

Get on the Band Wagon with a CHALLENGE PAPER DRILL



● More printers and binders are choosing Challenge than any other paper drill... they're making money on loose-leaf jobs, advertising novelties, indexing, and many other types of work requiring drilling, slotting, and cornering. The Challenge line includes everything from a hand-power bench model to electro-hydraulic power units — *all* equipped with the Challenge Automatic Trip Gage and having facilities for slotting and cornering. Ask for details today!

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Main Office and Factory: GRAND HAVEN, MICH.
Eastern Sales Office: 50 Church Street, NEW YORK

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"IMPROVED SATISFACTION" Draw Sheet
Gauges: .024, .026
"BROWN FACE" Draw Sheet
Gauges: .016, .018
"BLACK FACE" Draw Sheet
Gauge: .024
"TIBROCO" Draw Sheet
Gauge: .013
"COATED FELT" Blanket
Gauges: .050 to .063, .070 to .072, .074 to .100
"CUSHION CORK" Blanket
Gauges: .091 to .092
"TINGUCORK" Blanket
Gauges: .032, .036 to .075, .080 to .090
"FOUNDATION" Blanket
Gauges: .032, .042, .050, .058 to .073, .078 to .085

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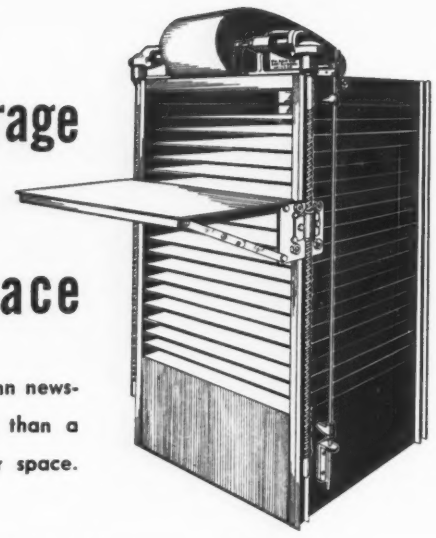
WOOD FLONG CORP.
HOOSICK FALLS NEW YORK

Made for Master Craftsmen By Master Craftsmen

MORE
Page Storage
LESS
Floor Space



Store 20 full 8 column newspaper pages in less than a square yard of floor space.

JUST plug the Reid-Hill Newspaper Storage Rack in the nearest electric outlet. It operates on either 110 or 220 AC or DC current.

It is then ready to handle your heavy page forms with ease and perfect safety, and, what's more, at a great saving in make-up trucks and valuable floor space. Weight 1600 lbs.

Get illustrated bulletin on how the Reid-Hill Newspaper Storage Rack will increase the efficiency of handling page storage in your composing room.

William Reid & Company
2271 Clybourn Avenue, Chicago, Illinois

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remarks the Old Timer

"I stuck to wet mats longer than most. Then I saw the nice job that people were getting with Certifieds—"

"They converted me to Automatics," cut in the foreman. "I was skeptical about such rapid casting, until I saw the perfect casts Certified Mats would give me."

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION
9 Rockefeller Plaza, Dept. M, New York, N. Y.

Certified
DRY MATS

The Printing Metals Situation

AS needs for our "arsenal for democracy" are stepped up, the general metal supply situation is becoming increasingly serious. Latest proof of this is the very recent act of O.P.M. in placing lead under mandatory control, which will prove a brand-new headache for type metal manufacturers. We understand metal dealers are now getting a premium above market quotations for lead, tin and antimony.

Aluminum: Under mandatory control.

Antimony: Orders being executed in routine manner — delivery about six weeks. Mexico is our chief source of antimony, the ore being smelted at Laredo, Texas.

Copper: Now under mandatory control. Heavy importations from Latin America continue, but not enough. Mills are now rationing all copper. Be prepared for slow deliveries.

Lead: The latest metal to fall under mandatory control. Demand continues very heavy. Despite heavy importations from Canada and Mexico, supply is falling behind demand. Deliveries slow. Government, through Metals Reserve Co., is purchasing foreign lead for its pool.

Nickel: Very tight. O.P.M. exercising mandatory industry-wide control over all supplies of nickel. Sales for non-defense uses restricted. It is reported that the printing industry may obtain ⅓ to ½ its 1940 purchases. See your dealer for proper procedure.

Tin: Despite one cargo of Straits tin sent to the bottom by Hitler in September, O.P.M. is in no hurry to impose rigid restrictions on this metal.

Zinc: Under tight O.P.M. mandatory control and allocations. Situation no better nor worse. Biggest use as an alloy with copper to make brass. Engravers should resell zinc scrap to printing suppliers. Government has set a ceiling of 6½c lb. on engravers' scrap zinc. Top quotation by dealers not over 6c lb. f.o.b. buyer's yard.

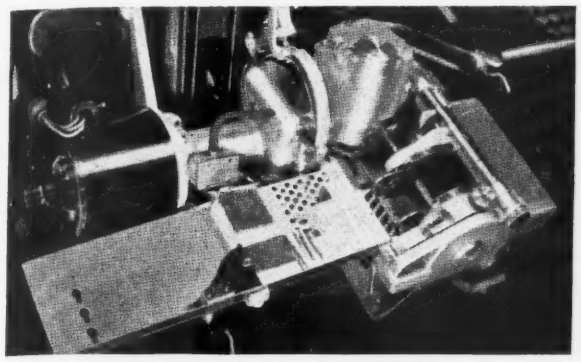
We continue to caution users of any metal to watch waste, maintain reasonably long inventories and only sell their scrap within the industry.

Nonferrous Metals Smelter Quotations
(100 lb. Lots)

	Sept. 3	*Oct. 1*
Aluminum (94%) minimum)	$15.50	$13.50
Antimony (spot, case lots, N. Y.)	14.00	14.00
Copper (refinery)	11.875	11.875
Lead (E. St. Louis pig)	5.70	5.70
Nickel (99% anodes) 500 to 2999 lb. lots	47.00	47.00
Tin (Straits spot pig) through December	52.00	52.00
Zinc (high grade slab)	8.25	8.25

These quotations furnished by *Daily Metal Trade*, Cleveland.

THE *Curle* SLUG CORRECTOR



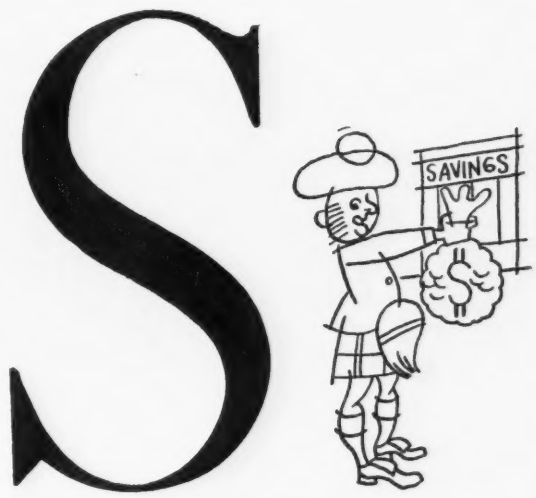
In one operation on Linotypes or Intertypes, the Curle Slug Corrector **automatically** performs the following operations: Low Slugs, blank spaces on slugs, Trims shoulders, Saws slugs to measure, Squares ends of slugs, and Trims ribbed side with slight taper so slugs will be thicker at bottom.

Slug composition trimmed to measure by Curle Slug Corrector is ready for assembling without further finishing operations of any kind. Saves time in makeup and press makeready.

FOR SERVICE AND INSTALLATION . . . WRITE OR CALL

In Los Angeles, Foster's Parts Agency, Phone Prospect 0426
In Chicago, Type & Press of Illinois, Phone Monroe 7766
In New York, Margach Mfg. Co., Phone Beekman 3-1791
In Philadelphia, Joseph A. Ryan, Phone Sunset 4507
In Minneapolis & St. Paul, Ford Tack, c/o Minneapolis Tribune
In Boston, G. S. Loring & Company, Phone Liberty 7439

***Mf'd by* CURLE MANUFACTURING CORP.**
500 SANSOME STREET SAN FRANCISCO, CAL.



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The Printers' desire
Specify KIMBLES
And savings are higher.

Motors by KIMBLE
Distributed by AMERICAN TYPE FOUNDERS
Branches and Sales Agents in 25 Cities

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Semi-Cylindrical • Unitubular
Tubular • High Speed Flat Bed
Flat Bed • Stereo Machinery

The Duplex Printing Press Co.
Battle Creek, Mich.

"FLECTO"
GUMMED PACKING FELT

"Flecto" gummed packing felt is succesfully used on all types of dry mats.

- ALL GUAGES ARE UNIFORM
- EASY TO TEAR
- DOES NOT SLIP

Gauges .021, .025, .030 and .035—Sheets 18 in. by 24 in. and gauges .040, .045, .050 and .060—Sheets 18 in. by 22 in. Cut into strips without charge.

Write for free samples.
Special discounts on quantity orders.

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35 COLORS, BLACKS, WHITES, COMPOUNDS

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ARE SPECIALLY DESIGNED FOR AUTOMATIC PRESSES

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THERE IS **NO SHORTAGE**

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The C&G Positive Worker, Any Angle Gauge, Universal Saw Grinding Attachment with Universal Blades, and the many other EXCLUSIVE C&G features insure maximum production with minimum time and effort.

Many leading printers and publishers are increasing sawing efficiency by replacing obsolete and worn-out equipment with the C&G 3-A SAW TRIMMER.

Write for complete facts or order now for PROMPT DELIVERY

MILWAUKEE SAW TRIMMER CORP.
610 EAST CLYBOURN STREET, MILWAUKEE, WISCONSIN

MAT PATTERNS

(Continued from Page 22)

fere with obtaining a true curve of the mat and may cause distortion of the relative positions of printing areas on a curved stereotype surface. Areas deeper than 0.050 in. interfere with casting good solid stereotypes. All of the dead or non-printing areas on the same plate should be routed to a uniform depth, regardless of the size of the area, but in no case to exceed 0.050 in.

Newspaper mat patterns should be supplied without bearers, to permit assembly in the page form.

Preparation of Material

In general, the electrotyper has little control over the electrotyping suitability of material furnished for electrotype mat pattern manufacture. Whenever possible, the following recommendations concerning the requirements of this original material for electrotyping should be made to the customers, photo-engravers, and typographers.

Type Matter—Type should not be etched. Wherever possible, a zinc thick (0.065 in.) electrotype of the type should be incorporated with the original photo-engraving of the illustrative material to obtain a molding pattern. It is not possible to etch as clean and sharp type as is obtained by an electrotype reproduction of the type.

In selecting the type face, extremes in delicate lines or boldness should be avoided in favor of more open type faces. The type itself should be clean, sharp and free from defects.

The locking of type forms for foundry should result in a squared unit with all type on its feet and with all of the printing surface on a plane. Shoulder high spacing is preferable and metal furniture should be used. Foundry bearers should meet in the corners and have a face width of at least ½ in. Bearers should be placed ¼ in. away from the printing area.

Photo - Engravings — Undercutting should be avoided. The engravings should have clean bottoms, edges with a slight bevel away from the printed face, freedom from shoulders, be properly routed, no holes should be routed through the plate, and have the desired depth in the halftone or screened subjects. The backs of the photo-engravings should be free from etched depressions. For zinc halftones having a 55 screen, a minimum depth of 0.008 in. is advisable in the light tones. At least 0.006 in. depth in the light tones of a 65 screen zinc halftone is recommended.

Electrotyping

Most stereotypers prefer the copper shell of the electrotype mat pattern to cover all of the surface of the pattern. The desired 0.050 in. depth in the non-printing areas may be obtained by "building" and "cutting-down", as necessary, instead of routing the finished plate, to obtain a continuous shell on the pattern surface.

An electrodeposited copper shell having the maximum hardness is desirable for mat patterns. The conditions of operation for producing copper electrotype shells having a relatively high tensile strength and fine crystalline structure are fully discussed in Circular 387 of the U. S. Bureau of Standards. The hardness of the copper (for a given thickness) determines in a large measure the resistance of the pattern to mashing during service.

For newspaper mat patterns, where a relatively few mats are to be molded (usually not more than twelve) the average electrotype shell thickness of 0.008 in., or better still 0.010 in., is entirely satisfactory. For commercial mat patterns, an electrotype shell thickness of 0.016 in. and preferably 0.024 in. is advisable. The hardness of the copper being deposited, anticipated service of the pattern, and nature of the subject will influence the choice of shell thickness.

Nickeltype mat patterns possess two advantages over copper electrotype mat patterns. First, the nickel on the face increases somewhat the resistance of the pattern to mashing and second, the nickel surface permits easier release of the mats because of the non-tarnishing properties of the nickel and the higher

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PRINTING PLANT FOR SALE ★ Printing Plant, Atlanta, Ga., Annual Capacity; $150,000. Good line of cutomers. Box 136 care Printing Equipment Engineer.

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Ideal gums have high tensile strength, mold easily and are abrasive-resistant. Save on ink and make-ready time. For more brilliant colors and for flat tints that are smooth and even, use plates made from Ideal plate gums.

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Helpful hints about handling inks, compounds, driers, etc. Valuable information prepared by experts. Write for it on your firm letterhead. It's FREE!

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"ELECTROMATIC"
"DOMORE" "CLIPPER"
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with
JUSTRITE SAFETY CANS • JUSTRITE WASTE CANS with
Approved and Labeled by Underwriters' Laboratories, Inc.
Sizes: 1 Pt. to 1 Gal. and 2, 3, 5 Gal. Sizes: 6, 8, 10, 14, 25 Gal. with foot lever
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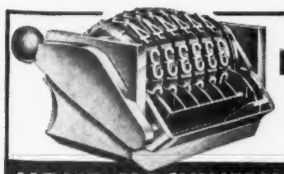

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surface tension of the nickel as compared to the copper. It is necessary to clean the discolorations that take place during the molding from the copper patterns at intervals during mat molding schedules. Sticking of mats may occur if this cleaning is not performed.

Copper faced patterns may be nickel plated and are entirely acceptable and satisfactory in results. Precaution should be taken not to plate a film of more than 0.001 in. nickel to avoid filling up of detail.

Summary

Electrotype mat patterns should be prepared as follows:

1. Do not mount them on wood or metal, unless specifically instructed to do so.
2. The thickness of the plate should be:
   a. 0.105 in. for newspaper use
   b. 0.152 in. for commercial and job use.
   c. Every precaution to obtain an accurate and uniform thickness of plate should be observed.
3. For one color (black and white) patterns — rout out all dead metal (non-printing areas).
   For color or register patterns:
   a. Leave all dead metal (non-printing areas) in the plate. Prepare as nearly solid surface as possible. Rout ¼ in. gutter between printing and non-printing areas.
   b. Mark dead metal as such for ease in identifying those areas to be routed out in the stereotype.
   c. Leave all register marks, etc. on the pattern.
   d. Maintain a uniform distance (below the printing surface) all over the pattern face for non-printing areas. This distance should not exceed 0.050 in.
4. Leave bearers on patterns for commercial shops and trim them off of patterns for newspaper use.
5. Electrotype shell thickness should be:
   a. Approximately 0.008 in. preferably 0.010 in. for newspaper patterns.
   b. Approximately 0.016 in., preferably 0.024 in. for commercial patterns.
   c. At least 0.024 in. for severe service.
   d. A film of nickel (0.001 in.) on the pattern surface is preferred to a copper face. This may be electrodeposited on the mold face or the face of the finished copper pattern if desired.
6. Special mat pattern preparation methods for unusual resistance to mashing during service:
   a. "Hard" metal alloy backing may be used—a tin content from 4% to 8% and antimony from 4% to 15% indicate the limits of composition of "hard" alloys.
   b. A laminated shell (alternate deposits of nickel and copper —preferably in a ratio of 10 copper to 1 of nickel) backed with regular electrotype metal alloys offers unusual resistance to mashing.
   c. By heat treating an electrotype pattern, the electrotype metal backing of the pattern may be hardened to a value almost 100% greater than the cast hardness.

The successful performance of an electrotype mat pattern depends upon the proper suitability of material for electrotyping, careful attention to electrotype manufacturing processes, and an intelligent use of the pattern by the stereotyper. Thus, cooperation between three of the Graphic Arts is necessary. Unsatisfactory results may be expected where this cooperation and an appreciation of subsequent mechanical procedure is not present.

Every possible avenue of improving the appearance of newspaper insertions should receive favorable consideration. An improvement in the quality of the printed newspaper advertisement may be one means to aid in checking the downward trend of the volume of newspaper advertising space. Properly prepared electrotype mat patterns would provide an excellent start.

Advertisers' Index for October, 1941

Altair Machinery Corp. 45
Agency: Yogg & Co., Newark, N. J.

American Publishers Supply 40

American Roller Co. 45
Agency: Moore Associates, Chicago, Ill.

Atlantic Zinc Works, The 35

Booth, The E. A. Rubber Co. 31

Brandtjen & Kluge, Inc. 27

Bryant Paper Co. 12

Burgess Cellulose Co. 36
Agency: Almon Brooks Wilder, Inc., Chicago, Ill.

Certified Dry Mat Corp. 42
Agency: The H. P. Boynton Advertising Agency, Cleveland, Ohio

Challenge Machinery Co., The 41
Agency: Simmonds & Simmonds, Inc., Chicago, Ill.

Champion Paper & Fibre Co., The 4

Cline Electric Mfg. Co. 45
Agency: Almon Brooks Wilder, Inc., Chicago, Ill.

Curle Mfg. Corp. 43

Cushman Electric Co. 45

Duplex Printing Press Co., The 43

Eagle Printing Ink Co. 37
Div., General Printing Ink Corp., New York, N. Y.

Eastern Newspaper Supply 39-43

Edes Manufacturing Co., The 38
Agency: Callaway Associates, Inc., Boston, Mass.

Goss Printing Press Co., The 13
Agency: Simmonds & Simmonds, Inc., Chicago, Ill.

Hamilton Manufacturing Co. 39

Hammond Machinery Builders, Inc. 9
Agency: Crescent Advertising Service, Kalamazoo, Mich.

Harris-Seybold-Potter Co. 8
Agency: Baker and Baker & Associates, Inc., Cleveland, Ohio.

Herrick, William C., Ink Co., Inc. 44
Agency: Fred Glen Small, New York, N. Y.

Ideal Roller & Mfg. Co. 45
Agency: Arthur E. Theobald, Advertising, Chicago, Ill.

Imperial Type Metal Co. 37

International Printing Ink Corp. 43
Agency: T. J. Maloney, Inc., New York, N. Y.

Intertype Corp ..... **Outside Back Cover**
Agency, Fred Glen Small, New York, N. Y.

Justrite Manufacturing Co. 45
Agency: Behel and Waldie, Advertising, Chicago, Ill.

Kelly, E. J., Co. 45
Agency: Almon Brooks Wilder, Inc., Chicago, Ill.

Kimble Electric Co. 43
Agency: Kirkgasser-Drew, Inc., Chicago, Ill.

Lanston Monotype Machine Co. 23

Linotype Parts Co. 34

Ludlow Typograph Co. 3
Agency: Almon Brooks Wilder, Inc., Chicago, Ill.

Matrix Contrast Corp. 14
Agency, Fred Glen Small, New York, N. Y.

Mergenthaler Linotype Co. ..... **Inside Front Cover**
Agency: Kenyon & Eckhardt, Inc., New York, N. Y.

Miehle Printing Press & Mfg. Co. 10-11
Agency: Kirkgasser-Drew, Inc., Chicago, Ill.

Milwaukee Saw Trimmer Corp. 44
Agency: Clifton Kirkpatrick, Chicago, Ill.

Mohr Lino-Saw Co. 41
Agency: Almon Brooks Wilder, Inc., Chicago, Ill.

Montgomery & Co. 45

Ostrander Seymour Co. 45
Agency: Clifton Kirkpatrick, Chicago, Ill.

Rapid Roller Co. 29
Agency: Burton G. Feldman & Associates, Chicago, Ill.

Reid, Wm. & Co. 42

Richards, J. A. Co. 45

Rouse, H. B. & Co. 45
Agency, Clifton Kirkpatrick, Chicago, Ill.

Royle, John & Sons 33

S K F Industries, Inc. 6
Agency: Geare-Marston, Inc., Philadelphia, Pa.

Sta-Hi Corp. 1

Teletypesetter Corp. 37
Agency: Newell-Emmett Co., Inc., New York, N. Y.

Tingue, Brown and Co. 41
Agency: The House of J. Hayden Twiss, New York, N. Y.

United American Metals Corp. 39

Vandercook & Sons ..... **Inside Back Cover**
Agency: Clifton Kirkpatrick, Chicago, Ill.

Vulcan Proofing Co. 7
Agency: Fred Glen Small, New York, N. Y.

Wetter Numbering Machine Co. 31
Agency: O. S. Tyson & Co., Inc., New York, N. Y.

Wood Flong Corp. 41
Agency: LaPorte & Austin, Inc., New York, N. Y.

Wood Newspaper Machinery Corp. 25
Agency: Fred Glan Small, New York, N. Y.

free TECHNICAL INFORMATION AND LITERATURE FOR *you*

Offered by Display Advertisers in PRINTING EQUIPMENT Engineer

Circle the numbers on the convenient postage-paid return card, give your name and title, and company address, then mail — we do the rest. Manufacturer or supplier will send mechanical and production executive readers information about equipment or supplies. This card saves you time and postage—Keep informed—No obligation.

Platemaking

1 ZINC—Atlantic Zinc Works will send you the booklet, "Getting Down to Zinc Facts." As advertised in this issue, page 35.

2 MASTERFORMER—Sta-hi Corp. offers a booklet on the uses and features of Masterformers. As advertised in this issue, page 1.

3 ROUTING CUTTERS—Get the John Royle catalog 425 of Routing Cutters. As advertised in this issue, page 33.

4 ZINC—Return the post card for complete data on Edes products for photoengraving. As advertised in this issue, page 38.

5 DRY MAT—Circle this number for a sample of Wood Dry Mats for newspapers. As advertised in this issue, page 41.

6 ENGRAVER'S SUPPLIES — Harold M. Pitman Co. offers information on news engraving processes.

7 STEREOTYPE SUPPLIES — Return the post card for information on Coyne & Paddock products for stereotypers.

8 DRY MATS—Certified offers an interesting booklet about plate duplication with dry mats. As advertised in this issue, page 42.

9 ROTARY SHAVER—Circle this number for complete details of the Barker Rotary Shaver.

10 AUTOPLATE—Get details from Wood Newspaper Machinery Corp. on the performance of the Automatic Autoplate. As advertised in this issue, page 25.

11 DIRECT PRESSURE-PRESS — Get information on Directomat, Lake Erie Engineering Corp's. direct pressure press.

12 PHOTOGRAPHIC MASKING TAPE —Eastern Newspaper Supply offers a sample of "Foto-Tape" for masking down negatives. As advertised in this issue, page 39.

13 STEREO SUPPLIES — Eastern Newspaper Supply offers free samples of "Flecto" Gummed Packing Felt and "Plate-Tak" Cut Mounting Tape. As advertised in this issue, page 43.

14 DIRECT PRESSURE MOULDING PRESS—The Ostrander-Seymour Co. says—"for finer printing and greater detail in stereos, and low production costs investigate the 800 ton Matrix Moulding Press.

15 PACKING FELT — American Publishers Supply offers samples of Glutex Packing Felt. As advertised in this issue, page 40.

Composing Room

16 COMPOSING ROOM SAW—Return the reply card for bulletin describing the Hammond Mercury TrimOsaws. As advertised in this issue, page 9.

17 TYPEFACE SPECIMEN — Send for a copy of the complete showing of Ludlow Radiant. As advertised in this issue, page 3.

18 RULE FORM BROACH — Circle this number for particulars on "the machine that is revolutionizing ruled form production."

19 COMPOSING MACHINE — Return the post card for literature on the features of Blue Streak Linotypes. As advertised in this issue, inside front page.

20 REMELTERS—Get more data on United American Big and Little Chief Remelters. Circle this number and state your metal turn over on the line at the bottom of the card, and mail. As advertised in this issue, page 39.

21 SAW SHARPENING—Automatic Saw Sharpening Service Co. will tell you how you can get new saw blades free.

22 COMPOSING MACHINE — Send for your copy of the Linograph "50" Catalog.

23 SAW TRIMMER—Send for 8 page booklet explaining features of C & G No. 3A Saw Trimmer. As advertised in this issue, page 44.

24 STORAGE RACK—Return the post card for details on the Reid Newspaper Storage Rack. As advertised in this issue, page 42.

25 COMPOSING MACHINE SAW — Circle this number for the booklet, "Short Cuts with Odd Measures." As advertised in this issue, page 41.

26 CUT CEMENT—Let E. A. Booth Rubber Co. tell you how useful Zink Cut Cement can be to you. As advertised in this issue, page 31.

27 TYPE METAL—Send for the informative Imperial booklet on type metal problems. As advertised in this issue, page 37.

28 MATRIX CONTRAST — "Prevents errors by lessening eyestrain." Send for booklet On Visibility Tests. As advertised in this issue, page 14.

29 COMPOSING MACHINE — Circle this number for the complete story of the Monotype "3 Way System." As advertised in this issue, page 23.

30 REPLACEMENT PARTS—Send for your copy of Linotype Parts Co. catalog on replacement parts for linotypes. As advertised in this issue, page 34.

31 PROOF PRESSES—Return the post card for complete information on No. 320-G Vandercook Proof Press. As advertised in this issue, inside back cover.

32 NUMBERING MACHINE — Wetter offers you an unique booklet, "Numbering For Profit." As advertised in this issue, page 31.

33 TELETYPESETTER — Send for an informative booklet on composition with Teletypesetter. As advertised in this issue, page 37.

34 METAL FEEDER—Circle this number for more information on the Margach Metal Feeder.

35 REPLACEMENT PARTS — Return the reply card for Montgomery & Co's catalog of parts for line-casting machines.

36 METAL POT CONTROL—Get full information on the Hogan Auto-Pilot gas control "for safe, economical operation of metal pots."

37 COMPOSING MACHINE SAW — Get full details on the operation of the Curle Slug Corrector. As advertised in this issue, page 43.

38 LINECASTING MACHINE MOTOR —Return the post card with this number circled for details on the Cushman Offset Motor.

39 TYPE METAL—Circle this number, E. W. Blatchford Co. will send you information on type metals and plate making metals.

40 WORKING TOP—Send for Hamilton Catalog No. 22 on Type Cabinets and Working Tops. As advertised on page 39.

41 REBUILT EQUIPMENT—M. L. Abrams Co. will send you information on its line of rebuilt equipment.

42 LINECASTING MACHINE MOLD — Stripfounders will furnish you with data and prices on molds for Linotypes and Intertypes.

43 VERTICAL MITERER—H. B. Rouse & Co. asks you to get illustrated circulars on the Rouse Vertical Miterer.

44 COMPOSING MACHINE — Get the interesting folder describing the installation of Universal Intertypes in the plant of J. W. Ford Company. Advertisement on outside back cover.

Pressroom

45 INK—Wm. C. Herrick Ink Co. offers information on news ink and color.

46 ROLLERS—Return the post card for information on Godfrey rollers.

47 PRESS DRIVES, PASTERS—Cline Electric Mfg. Co. will send you information on electric control systems.

48 PRESS PACKING—Return the post card for more data on Goodyear packing.

49 INK—Return the card for more information on Johnson Inks.

50 PRESS ROLLERS—Wild & Stevens, Inc. will send you data on its complete line of rollers.

51 NEWS INKS—Get information from Geo. H. Morrill Co. about planned color selection.

52 PRESS BLANKETS—Get the details on the complete New England line of newspaper press blankets.

53 ROLLER CLEANING MACHINE — Return the post card for information on the Hi-Speed roller cleaning machine.

54 ROLLERS—Get the details and "the advantages of synthetic rubber rollers," from Dayton Rubber Mfg. Co.

55 INK—The Geo. H. Morrill Co. asks, "May we show you our colors?" Yours is waiting for you.

56 NEWSPAPER PRESS—For complete data on Unitubular Presses, just return the post card.

57 CUTTER KNIVES—To get details on Coes Micro-Ground Knives, return the post card with this number circled.

58 PAPER CUTTERS—Circle this number on the post card to get specifications on Chandler & Price Craftsman cutters.

59 INK—Send for details about Wotta Blacks, quick drying, non-scratch, no-offset inks that save a lot of time, worry and grief.

60 ROLLERS—Ideal Roller Co. offers to send you information on the Ideal roller for your presses.

61 INK—Send for IPI's Handy Color Guide. Circle this number for your copy.

62 ROLLERS—Get more information on Mercury rollers or press blankets. As advertised in this issue, page 29.

63 PAPER—Get your copy of the International demonstration folder. Circle this number for your copy.

64 FOLDERS—Dexter Folder Company will give you latest specifications on the four models of the Cleveland Folder.

65 NEWS INK—Investigate Cold Set inks. Circle this number and return the post card.

66 INK—Use the post card to get your copy of the Flint Color Selector.

67 PAPER—Bryant Paper Co. will send you samples of Bryant coated papers, for advertising. As advertised in this issue, page 12.

68 INK—Fuchs & Lang offers you information on how "laboratory proven inks can help the pressman."

69 INK—Eagle Printing Ink Co. offers informative material on the use of color. Send for it. As advertised in this issue, page 37.

70 PRESS BLANKETS—Circle this number for recommendations on the Vulcan blanket for your use. As advertised in this issue, page 7.

71 PRESS UNITS—Get details on Goss Anti-Friction Units for magazine and news production. As advertised in this issue, page 13.

72 PRESSES — Miller Printing Machinery Co. welcomes the opportunity to help you to get greater production in your pressroom.

73 PRESS BLANKETS—Tingue, Brown & Co. will send you specifications on Tingue blankets for every use. As advertised in this issue, page 41.

74 PRESS—Get the facts on how the "Miehle V-50 will push production up and keep costs down." As advertised in this issue, pages 10 and 11.

75 INK—Ask for literature on Sinclair & Valentine Zephyr Blacks. Just circle this number and return the post card.

76 PAPER — Champion offers information on "papers for advertising." As advertised in this issue, page 4.

77 PRESS—Brandtjen & Kluge will send details on "the press with perfect control." As advertised in this issue, page 27.

78 CUTTER KNIVES—Get details on the advantages of equipping your cutters with SWW Paper Knives.

79 PRESSES—For more details about Meisel presses circle this number on the post card.

80 PATENT BASE—Get particulars on, P-M-C Sterling Toggle Hook and Base System, "to speed up production."

81 ROLLERS—Circle this number for information on how, "American Rollers can give you greater Roller Mileage."

82 ANILINE PRESS—Write for attractive folder about the uses of the Cottrell-Heinrich Aniline Press.

83 PRESSROOM AIR CLEANER — Investigate this two purpose device, for use on the delivery end of your press, for better light and removing offset spray particles.

84 PAPER CUTTER—Get the free book illustrating features of Challenge Paper Drills. As advertised in this issue, page 41.

85 NEWSPAPER PRESS EQUIPMENT — R. Hoe & Co., Inc., asks you to consider "Hoe Leadership" when selecting mechanical equipment.

86 INK—Fred'k. H. Levey Co., Inc. offers data on inks for letterpress, offset, and gravure.

87 4 COLOR ROTARIES—Send for details and specifications on the two Cottrell Claybourn Rotaries available now.

88 OFFSET PRESS—Get valuable information about offset and specifications on the Harris EL 22x34 Single Color press. As advertised in this issue, page 8.

Miscellaneous

89 BEARINGS—Norma-Hoffman Bearings Corp offers you its catalog of bearings for the printing industry.

90 MOTORS—Kimble Electric Co. will send you a booklet on motors for use in the printing industry. As advertised in this issue, page 43.

91 BEARINGS—Get information from SKF on bearings for your requirements. As advertised in this issue, page 6.

92 BEARINGS—Return the post card for information on Timken Tapered Roller Bearings.

October

PRINTING EQUIPMENT Engineer
1276 West Third Street, Cleveland, Ohio.

Without obligation please have the manufacturers send me literature or information circled below.
(These numbers correspond to numbers of descriptive paragraphs).

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92			

NAME.....TITLE.....DEPT.....

FIRM NAME.....

STREET .....CITY.....STATE.....

NOTE: I am especially interested in (give details)

.....

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 2255 (SEC. 510 P. L. & R.) CLEVELAND, OHIO

PRINTING EQUIPMENT *Engineer*

1276 West 3rd Street

Cleveland, Ohio

Large Motor driven Ink Drum, Vibrator, and four Form Rollers insure thorough ink distribution.

Twenty to forty good proofs per minute. Rate of speed can be changed to meet the ability of the operator.

Impression Cylinder and Inking Rollers are rigidly held down to the Bearers, insuring even impression over the entire form.

Vandercook Vibrator and Rubber Form Rollers require no adjustments. Hot metal will not injure the Vandercook Rubber Form Rollers.

Precision construction throughout. Compact design facilitates operation. Little floor space is required.

Vandercook Special three-density Vulcanized Rubber Impression Cylinder insures good proofs of forms varying as much as .015" in height.

All Shafts are carried in Ball Bearings with lubricant sealed in.

Clutch and Brake are equipped with Raybestos Molded Facings.

MORE PRODUCTION FROM VANDERCOOK *ELECTRIC* PROOF PRESSES

Running speed is important, but final production in proving material in galleys depends on the quickness of galley changes, elimination of waste motion and general convenience of operation.

No. 22 and No. 23 Vandercook Electric Proof Presses will print up to 40 proofs a minute with MINIMUM operator fatigue. They afford the fastest method of proving type and plates in galleys.

The No. 23 Vandercook Electric Proof Press is used extensively for proving ads, tabloid size newspaper pages, catalog and book pages. It takes a galley up to 14"x 27½". The No. 22 Vandercook Electric Proof Press is a favorite for proving small ads, book pages, and material as it comes from the typesetting machines.

Complete information on the No. 22 and the No. 23 Vandercook Electric Proof Presses will be sent at your request and without obligation to you.

VANDERCOOK & SONS

908 NORTH KILPATRICK AVENUE · CHICAGO, ILLINOIS

EASTERN BRANCH: 220 EAST 45TH STREET, NEW YORK, NEW YORK

Canada: SEARS LIMITED, Toronto, Montreal, Winnipeg, Vancouver

FORD Steps Ahead WITH NEW
NIVERSAL STREAMLINED INTERTYPES
. . . AND MORE NEW TYPE FACES!
NEW TYPE FACES
SPECIAL FEATURES for Persons Interested in Mechanical Rules
PRESSROOM Added to Feed Service
We Do Not Solicit Printing
THE J. W. FORD COMPANY · CINCINNATI
Advertising Typographers

And now—another Intertype Mixer for The J. W. Ford Company

ONE YEAR AGO The J. W. Ford Company, Advertising Typographers, Cincinnati, bought two eight-magazine Intertypes. Impressed by the many outstanding features of these machines, Carl H. Ford, the company's president, wrote and published an interesting folder describing the new equipment and explaining what it would mean to Ford customers. The inside of the folder is shown above.

IN A LETTER sent recently to the Brooklyn office of Intertype Corporation, Mr. Ford says:

"The last installation (referred to in the folder) *has worked out so well for us that you now have an order from us for another Universal Mixer."*

IN HIS FOLDER, Mr. Ford states that "... through the diligent cooperation of the Intertype Corporation, we are now able to offer, at no increase in cost, the very latest and most widely used type faces, with an even greater range of mixing possibilities than ever before, strictly 'on the Intertype.' "

THE FOLDER contains much interesting information about Universal Intertypes. Copies are available to other advertising typographers, trade compositors, and printers and publishers generally, together with a catalog of Universal Intertypes. Please address INTERTYPE CORPORATION, 360 Furman Street, Brooklyn, New York, or nearest Intertype branch.

FUTURA DEMIBOLD AND GARAMOND BOLD

Step Ahead with the UNIVERSAL INTERTYPE